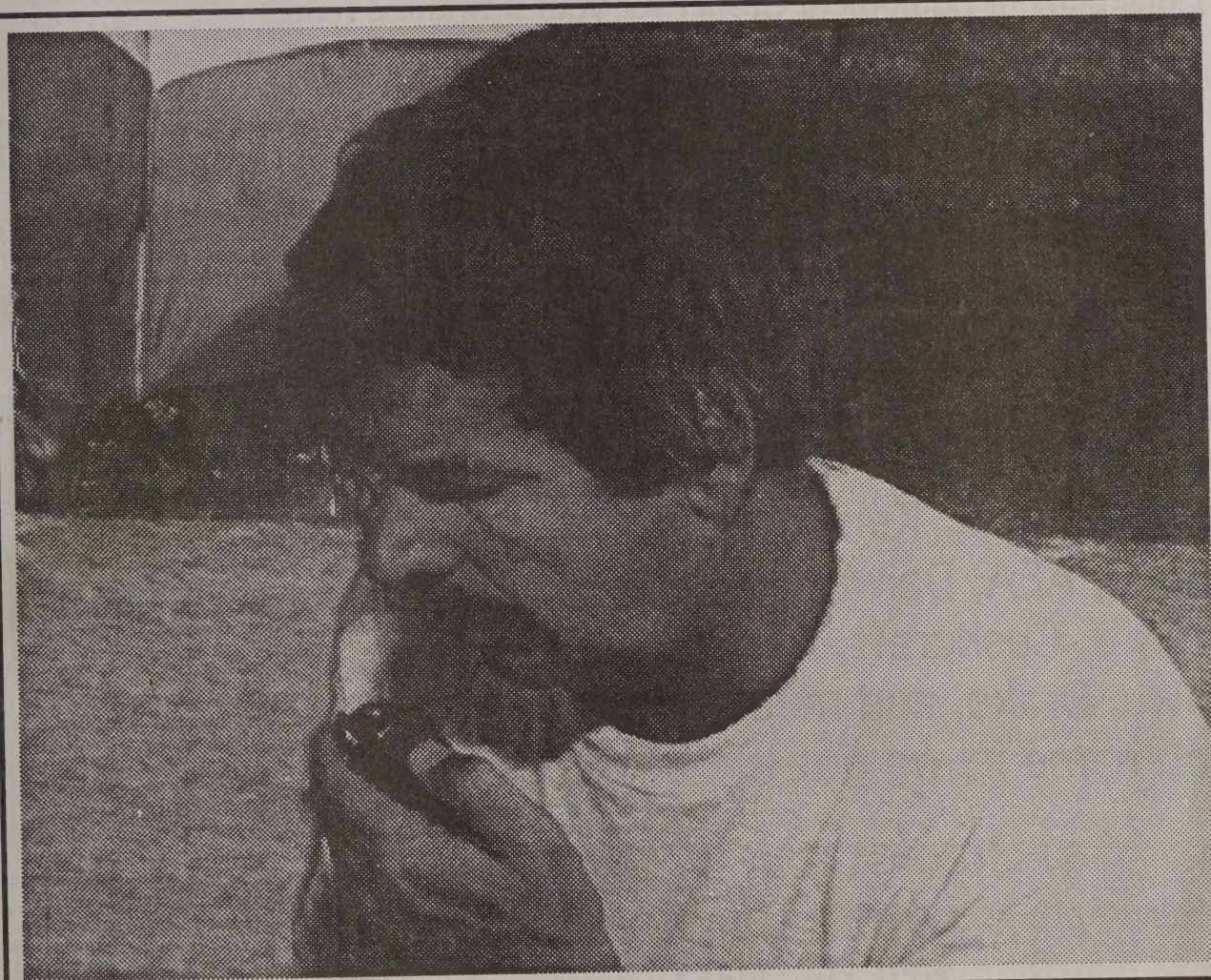




*The Official Journal of the Foundation For Amateur Radio, Inc.*

**AUGUST 1995**

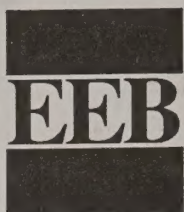


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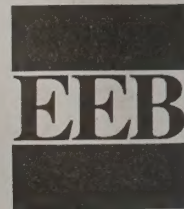


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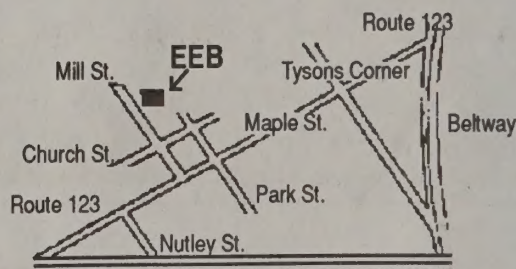
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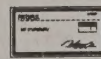
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# Regional Hamfests and Other Events

August 5	Jefferson County ARC Hamfest, Clayton, NY
August 5	7th Annual High Point RC Hamfest, High Point, NC
August 6	Mid-Atlantic Amateur Radio Club Hamfest 95, Warrington, PA (215) 624-4034
August 6	Shenandoah Valley ARC Winchester Hamfest, Berryville, VA (703) 955-1745
August 6	Skyview Amateur Radio Club, New Kensington, PA
August 12	Fingerlakes Hamfest, Ithica, NY
August 13	SARA Carroll County Computer & Hamfest, Westminster, MD (410) 859-1475
August 13	Del Lehigh ARC Hamfest, Easton, PA
August 13	Queen City Hamfest/Computer Fair, Charlotte, NC
August 20	Delmarva, Georgetown, DE
August 27	Goucester County Amateur Radio Club, Mullica Hill, NJ
Sept. 2/3	39th Annual Hamfest, Shelby, NC
Sept. 9	Radio Association of Erie Hamfest, Erie, PA
Sept. 10	Butler County ARA Hamfest, Butler, PA
Sept. 10	F.A.R. FEST, Gaithersburg, MD (301) 490-3188
Sept. 16	Buffalo Hamfest, Hamburg, NY
Sept. 16	Fallfest, South Boston, VA
Sept. 16	ARRL Westion NY Section Convention, Hamburg, NY
Sept. 17	South Jersey Radio Association, Pennsauken, NJ
Sept. 23/24	Virginia Beach Hamfest & Computer Fair, Virginia Beach, VA
October 1	Pack Rats - Warrington, PA
October 15	Columbia Amateur Radio Association, West Friendship, MD (410) 992-8209
October 22	RF Hill Amateur Radio Club, Sellersville, PA
October 29	Mason-Dixon Computer & Hamfest, Westminster, MD (410) 374-4544
October 29	Pen n Wireless Association, Newton, PA
November 11	Central PA Repeater Association, Hershey, PA
November 19	WACOM, Washington, PA



(photo by Barbara White / N3OBU)

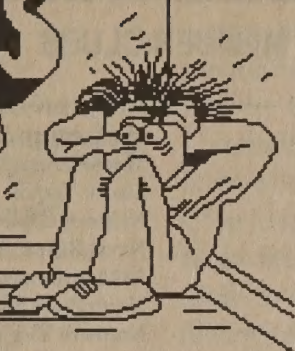
## On The Cover

Pictured on this month's cover of *Auto Call*, is Bob Baltz, N3MNT. Bob is pictured here working yet another QSO at the 20 meter station during Field Day '95. Active in many facets of amateur radio, Bob is a member of the Anne Arundel Radio Club. Bob is also the Foundation for Amateur Radio's selection for Ham of the Month! (See page 13 for more details). Congratulations to you Bob!



# Editor's Corner

By John Queen  
KAØSEY



Did you ever stop to think about some of the terminology we use in ham radio? Stop. Think about it. Okay, now let's proceed.

For example, where did the phrase "band opening" come from? The way I see it, a band opening is when someone leaves a musical group and the group is looking for a replacement.

But probably the word that bothers me most in amateur radio is "ham". Just what does the word "ham" mean, anyway? Some people say that it comes from the initials of Henry A. Marconi, an early pioneer in radio. Except that Marconi's name was Guglielmo Marchese Marconi. And if that were the case, we'd all be gmm's. And that would be hard to pronounce, and stupid as well.

Daniel Webster tells me that a "ham" is a familiar barnyard animal commonly known as a pig. But then what does that have to do with the amateur radio community? Not much, unless you're making reference to someone who hogs a frequency on your favorite band.

Most amateur operators, when queried about the meaning of "ham", simply throw up their hands in despair, drop their heads in utter disbelief that someone is asking that stupid question again, and silently mutter, "I dunno".

I have often pondered this mystery of ours. I remember lying awake in bed many a night wondering silently if mankind could ever, would

ever, or should ever find the meaning of "ham". After all, what are we supposed to tell our grandchildren? "Grandpa why do they call it ham?" "I don't know child, no one really knows. That's just what we call it." "That's S-T-U-P-I-D, Grandpa."

How could two million amateur radio operators all over the world not see it? Not know it? Not feel the meaning of 'ham' pulsating through their bodies?

Then one day it hit me. It hit me like a 10 meter DX pile-up on a warm summer day. It was so obvious. So very 'in front of your face'. I couldn't believe that I was so blind for so long. The answer is so easy. So elementary. So simplistic.

The meaning of the word "ham" is that there is no universal meaning. Because, for every amateur radio operator throughout the world, there is a different meaning. Ham means what you want it to mean. And that's the beauty of it. Be it VHF, 20 meters, packet, ATV, 440, satellites, or publishing a magazine for fellow amateurs, "ham" is your personal expression of electronic communication.

Enjoy the privilege of being a "ham". Nurture it, and never take it for granted. And the next time someone asks you what "ham" means, look them square in the eye and tell them, "It doesn't matter what it means. It's a lot better than being a gmm".

73's, de KAØSEY, John



# The Foundation For Amateur Radio, Inc.



Washington, DC

## MEMBER CLUBS

Adams County Amateur Radio Society  
Alexandria Radio Club  
Amateur Radio Research and Develop. Corp.  
AMSAT - Radio Amateur Satellite Corporation  
Anne Arundel Radio Club  
Antietam Radio Association, Inc.  
ARINC Amateur Radio Club  
Arlington Amateur Radio Club  
Baltimore Amateur Radio Club  
Baltimore Radio Amateur Television Society  
Capital City Amateur Radio Society  
Capital Hill Amateur Radio Society  
Carroll County Amateur Radio Club  
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Department of State Amateur Radio Club  
Fauquier Amateur Radio Association  
Frederick Amateur Radio Club  
Frederick Amateur Repeater Group  
Friendship Amateur Radio Club  
Goddard Amateur Radio Club  
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Metrovision Amateur TV Club  
Mid-Atlantic DX & Repeater Assn.

Montgomery Amateur Radio Club  
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Moose Amateur Radio Club  
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National Capitol DX Association  
Naval Research Laboratory Radio Club  
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Sterling Park Amateur Radio Club  
Summit Amateur Radio Association  
Tri-County Amateur Radio Club  
T-MARC, Middle Atlantic Repeater Council  
Vienna Wireless Society  
Voice of America Amateur Radio Club  
Waldorf Repeater Support Club  
Washington Adventist Amateur Radio Assn.  
Washington Area Young Ladies ARC  
Woodbridge Wireless, Inc.

## NEXT FOUNDATION MEETING

The Foundation for Amateur Radio, Inc. meets at 8: p.m. on the second Wednesday of each month. Visitors are always welcome! The next meeting will be held on August 9th in Takoma Park, Maryland at Columbia Union College, HMS Richards Bldg., Flower Avenue (Take beltway exit 30, South on Colesville Road to Franklin Avenue, left on Franklin to Flower, right on Flower to Carroll Ave., left on Carroll to Greenwood Ave., left on Greenwood to 2nd building.

Talk-in on  
146.55





# FCC Highlights

By Jack Kelleher.  
W4ZC

## FCC FORUM AT DAYTON

The remarks of John Johnston and William Cross at the FCC Forum are, in my opinion, an outstanding discussion of our Rules and how they get that way, and a very valuable set of guidelines to the amateur fraternity concerning our activities and responsibilities under those rules. Here is the first half of the text; we hope to have room to finish it in the next issue.

"It has been a busy year for the FCC. Our Licensing Division switched over to a PC-based processing system. We held our first spectrum auctions. There was a new telephone system installed. And everyone got a brand new PC on their desk.

"It also was a busy year for the amateur service. Your ranks grew by 47,000 - - your biggest annual growth ever. Rules for a Vanity Call Sign system were adopted. Electronic filing and data base licensing came on line. There were new rules for your automatic message forwarding systems and for automatic control of your HF stations. You were advanced to Primary (status) on the 13 cm band. You got more frequencies on the 1.25 meter band.

"You made this possible. It is primarily through your petitions and comments that we develop our understanding of what it is that the amateur community needs and wants.

### How rule making is handled by the FCC

"Most years, some 25 to 50 petitions come sailing over the transom asking for changes to Part

97. Most are frivolous, repetitive, based on misinformation, or otherwise do not deserve to occupy the FCC's time. If a petition contains something that the amateur community wants and that the FCC can provide, a Notice of Proposed Rulemaking (NPRM) is drafted for the Bureau. If it is accepted, it is then presented to the Commissioners for their consideration. If they adopt the item, it is given a Docket number. This event is announced by a news release. The text follows shortly after so that you can see the exact proposal.

"You are then on notice that the FCC is thinking about changing Part 97. Get a copy of the NPRM and read it carefully. Determine the issues that are important to you. Read what your columnists have to say. Discuss it at your radio club or on the air or wherever and with whoever you can have a meaningful dialogue.

"However, do not discuss it with us. From that point in time when the FCC proposes a rule change until the Commissioners make a final decision, the entire matter is on the record. There must be no one-sided presentations to the FCC. That is the reason that we cannot take your remarks in this Forum on certain on-going proceedings. I'll list those for you before we open the floor for your remarks.

"File your comments with the Secretary of the FCC. Do not send them to your field office. Do not send them to the Licensing Division in Gettysburg.

"For any of you who are not doing so already, you can be a big help to the amateur service by becoming an expert on Part 97 and on the rule making process.

"You can help us keep the rules easy to read and easy to use. The amateur service should have the absolute minimum of rules. We believe that you appreciate rules that are understandable and that you respect rules that are timely and realistic.

*Continued next page*



## Amateur Radio Communications

"Keep an up-to-date copy of Part 97 handy. Put it on your word processor. Follow your media reports on rule making. When new rules are adopted, be the first in your radio club to update your Part 97.

"When someone files a petition and when the FCC issues an NPRM, put your reaction on the record by sending in comments. You can help by playing the Devil's advocate to your fellow hams.

"You can help by conducting forums like this for your radio club. Your program chairman will thank you. Feel free to use any of the information that we present today.

"Listen to what other hams have on their minds. Your electronic bulletin boards provide thoughtful discussions of the issues. They give you the opportunity to test your own views on the amateur community.

"Another way you can help is by passing the word on 'WHY' the rules require what they do. Again, the reason a rule amendment is made is stated in the Order that adopted the rule. These documents are compiled in a publication called the FCC Record. It is for sale by the Government Printing Office. It may also be available in your public library.

"We often refer to the FCC Record. In the opening sentence of the vanity call sign Report and Order, for example, reference is made to the Notice of Proposed Rule Making. That sentence has a footnote which reads '9 FCC Rcd 105 (1993)'. That is in reference to where the NPRM can be found: Page 105 in Volume 9 of the FCC Record for 1993.

"There are other records that you can use. Rule making items are often printed in your publications. Some of them review what has taken place over the past year. Sometimes they will trace a matter through a series of rule makings from beginning to end. Some of them publish a yearly index that is helpful in determining the specific issue and the page that contains the information that you are seeking.

"Frequently, it is helpful to remind ourselves that amateur radio is, after all, a hobby. For most of this Century, it has been considered to be in the public interest for small segments of the radio spectrum to be set aside for use by persons like yourselves who are interested in radio techniques solely with a personal aim and without pecuniary interest.

"You are to use this very valuable resource to conduct self-training, intercommunication, and technical investigations. Here in the United States, it is stated up front in Part 97, just what benefits the public is to receive in return; A voluntary non commercial communication service, particularly with respect to providing emergency communications, contributions to the advancement of the radio art, advancing skills, more trained operators, technicians, and electronics experts, and enhanced international goodwill.

"Part 97 is based upon the abiding belief that you and every other amateur know how to operate a station properly in the United States and that you will always do so.

"There are certain general standards that you will observe:

You will use good engineering and good amateur practice, you will share the frequencies, you will cooperate fully in selecting transmitting channels, you will not willfully or maliciously cause interference, you will give priority to stations providing emergency communications.

"That is all codified in Section 97.101 entitled 'General Standards'. Part 97 requires you to prove to your peers that you are qualified to operate an amateur station properly in the United States at one of six levels of privilege.

"Having done that, you are granted permission to use certain of the frequency bands to:

*Continued next page*



Communicate directly with other amateur stations located practically anywhere in the World, even in space.

- Disseminate information bulletins and code practice,
- Communicate telecommand and telemetry,
- Operate a beacon, and
- Participate with other amateur stations in ad hoc communication systems.

"It appears that modern system operation can be quite a stretch for amateur radio. You handle the technical side very well, but the operational side often gives you difficulty.

"Part 97 provides you with great flexibility: 1,300 emission types; 1,500 watts; 27 frequency bands throughout the radio spectrum; no equipment type certification; you select your own channel; and so on. It allows you to build practically any type of system. But it doesn't give you an exclusive right to any frequency. You have to share.

"Nor do the rules regulate your systems as such. You encounter a basic contradiction, moreover, when your system transmits on channels that must be shared with many other stations that may be participating in other systems, or in no system at all.

"Depending on their size, times of operation, and the propagation characteristics of the frequencies your systems use, those channels are, in effect, no longer sharable.

"So you have to ask thousands — if not millions — of other hams to forego their self-training, intercommunication, and technical investigations on your systems' channels.

"Some of them, at least, may not share your enthusiasm for your systems. Perhaps they want those channels for their systems, or for some other type of communications. Possibly they feel threatened by new technology and new ideas.

Maybe they just don't like the way you went about selecting the channels.

"It remains for you to convince the amateur community that it is in everyone's best interests for them to give way to your systems. Apparently, some of you are much more successful at obtaining the needed cooperation than others. It also remains for you to responsibly manage your system - - - to oversee it and to make it work properly.

"It is also your responsibility to build into your system the degree of security that is needed to protect it against those who would abuse it. Initially, at least, the newness of the technology itself may provide your system with all of the security that it needs. Eventually, however, newness alone is probably not going to be sufficient.

"There is another hazard. As you design new systems, sooner or later you will find yourself impeded by Part 97. Today's rules are based upon your interests and technologies of yesterday. The rules won't change until the amateur community convinces both itself, and the FCC, that change is called for.

### **Digital message forwarding**

"Message forwarding has been one of your mainstream operating activities. You have had CW and phone nets since the very beginning.

"A decade or so ago, digital technology made high volume, high speed amateur systems practical. You linked your VHF and UHF stations to build easily-accessible automatic message forwarding packet systems.

"Some of your systems, however, could not handle high volumes of messages because the model Part 97 was based upon was that practiced by your phone and CW nets. Each operator in the relay chain screens every message before passing it along.

*Continued on page 52*





# American Radio Relay League Report

By John Swafford,  
W4HU

requirements for personal computers, peripherals, and individual components (in ET Docket No. 95-19).

The FCC proposal, made in February, would not change the substantive regulations governing unintentional emissions from Class B digital devices, and there is no proposal in the proceeding to increase the amount of permitted RF energy from personal computers, peripherals or their components.

"Theoretically," the League said, "radio amateurs will not be affected by this proceeding, notwithstanding the fact that the Commission's certification procedure is specifically intended to ensure that unintentional radiation devices not cause interference to radio services such as broadcasting, aeronautical and maritime communications, and the Amateur Service."

But the League did express concern that the FCC was proposing to give up oversight that in the past has kept interference from Class B computing devices to radio receivers within "practicable limits." This is a special consideration, the League said, now that many radio amateurs have PCs as permanent parts of their stations. The League said it was important that the FCC reaffirm its intention to increase enforcement against noncompliant devices, saying that "the amateur community includes some of the most prolific consumers of Class B digital devices."

The League said amateurs are concerned that new testing procedures could allow on the market more devices that either are not tested, do not meet RF emission requirements, or both.

The ARRL said its greatest fear is that there will not be significant enforcement of the new rules, nor any effort to evaluate the level of compliance on the part of the manufacturers, and that there will be no disincentive to simply market noncompliant products. Since the Commission's field offices today seldom respond to complaints of interference

*The ARRL Report provides a brief summary of information published in the ARRL Letter and other reports. The LETTER provides timely news of interest to active Radio Amateurs. Any League member may subscribe to the ARRL LETTER.*

## LEAGUE MEMBERS STAND BEHIND W1AW WITH OVERWHELMING RESPONSE ON PETITION

The ARRL has filed reply comments on the petition for rule making filed by Frederick O. Maia, W5YI, that sought to prohibit Amateur Radio stations from transmitting one-way information bulletins and international Morse code practice below 30 MHz (RM-8626). The League said in its reply that it has reviewed most of the 537 comments (received on the petition). This is an extraordinarily large number of comments in response to a rule making petition, and illustrates the depth of the sentiment of amateur radio operators about the issues raised in Maia's petition. The volume of comments filed, coupled with the fact that virtually all of them are opposed (many vehemently opposed to the petition makes it patently obvious that this petition was ill-conceived and should be dismissed without further delay.

## COMPUTER DE-REGULATION DRAWS LEAGUE RESPONSE

The ARRL has commented on an FCC proposal to deregulate the equipment and testing

*Continued next page*



to home electronics products, the only time that such issues can be adequately addressed is at the time an unlicensed device is marketed for sale to the public, the League said.

"There is not a scintilla of evidence, the ARRL said, "that the market-place is a sufficient arbiter of interference reduction or prevention in this context; and it is apparent that the Commission will have to be vigilant in its efforts to insure that the new procedures, if adopted, do not lead to an increase in noisy Class B digital devices."

Finally, the ARRL said that since Class B PCs can malfunction due to close-by RF fields, that every PC's Declaration of Conformity should identify where the owner can go for assistance in getting the device to function properly in the presence of RF.

### **RULES SET FOR THIS YEAR'S HPM BIRTHDAY CELEBRATION**

Last September's on-the-air commemoration of Hiram Percy Maxim's 125th birthday was such a great success that the ARRL Board of Directors decided to make it an annual affair. So if you remember what a great time it was last year, get ready! (Check out K1TN's article in January QST).

HPM-126 will be held September 2 to 10, 1995, with eligible stations this year signing "/126." This year, anyone who holds an ARRL volunteer position and is an ARRL member is eligible to sign /126. This adds (compared to last year) volunteer examiners, assistant emergency coordinators, QST Bureau workers, and awards managers who are ARRL members to participate as part of the ARRL family, as well as anyone else entitled to an "official" ARRL badge. As if that wasn't enough, if you're an ARRL life member, you're included this year, as well!

Just like last year, a special operation from W1AW is planned for the September 2-3 weekend. An expanded awards program also is offered, and will be detailed in August QST.

### **NH GOVERNOR SIGNS AMATEUR BILL INTO LAW**

New Hampshire Governor Stephen Merrill has signed into law a bill protecting amateurs' rights to antennas.

The bill, HB 379, earlier passed both the state's House and Senate unanimously and was signed by the governor on June 5. It was originally written to include slightly stronger language regarding antennas than that contained in PRB-1; the language was then fine-tuned at the suggestion of members of the legislature who are "friendly to Amateur Radio interests," according to ARRL New Hampshire Section Manager Al Shuman, N1FIK.

The bill was filed on the coattails of New Hampshire's HB 1380, passed in 1994, which provides protection from taxing Amateur Radio towers as real property. HB 379 reads: "No city, town, or county in which there are located unincorporated towns or unorganized places shall adopt or amend a zoning ordinance or regulation with respect to antenna used exclusively in the amateur radio services that fail to conform to the limited federal preemption entitled Amateur Radio Preemption, 101 FCC 2nd 952 (1985) issued by the Federal Communications Commission."

In addition to Shuman, other New Hampshire amateurs who helped in this victory included Rep Ralph Rosen, W1HSB; Rep Tom Kirby, W1EJ; Rep Rudy Adler, W1GUA; Jack Sheeby, WA1ALM, and Cal Calvitto, WA1WOK. Rep Rosen wrote the bill.

Rep Rosen said this was "not just an effort by one or two isolated amateurs but rather represented a concerted effort involving ARRL staff, officials, and volunteers in the League's Field Organization."

### **BRIEFS**

\*Amateurs who contribute to the AMSAT Phase 3D satellite fund will have their contributions

*Continued next page*



matched up to \$150,000, thanks to the bequests received last year from the estates of several Silent Keys.

The League's Board of Directors approved the matching funds at its January 1995 meeting. As of June 15 donations had topped \$112,000! Donors of \$50 or more will receive a colorful lapel pin featuring the Phase 3D logo. More information on this important project was on page 177 of May QST.

\*John Thernes, WM4T, of Covington, Kentucky, has been appointed vice director of the ARRL Great Lakes Division for the remainder of the term of office. He will serve until January 1, 1996. John, age 47, is a former section manager of Kentucky. The vacancy in the office of vice director occurred with former Vice Director George Race, WB8BGY, became the new division director following the resignation, for health reasons, of Al Severson, AB8P.

\*ARRL Laboratory Supervisor Ed Hare, KA1CV, presented a six-hour ARRL Educational Workshop on Electromagnetic Compatibility at the ARRL Northwestern Division Convention the weekend of June 10, as well as another one-hour EMC seminar and a one-hour presentation on electronic troubleshooting. At the same convention, Educational Activities Manager Rosalie White, WA1STO, conducted the ARRL Youth Forum, along with astronaut Susan Helms, who is studying for an amateur license.

\*The same June 3 weekend, the League's volunteer Public Relations Committee met at Headquarters. Attending were Chairman Rich Moseson, NW2L; Dennis McAlpine, K2SX; David Greer, WE4K; David Bell, W6AQ; Chet Bowles, AA1EX; and Board Liaison Paul Vydareny, WB2VUK. Manager of Legislative and Public Affairs Steve Mansfield, N1MZA, and Media

*Continued on page 23*

## CUSTOM EMBROIDERED CAPS GOLF SHIRTS and SWEATSHIRTS

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# Ham of the month

☆☆☆ Bob Baltz, N3MNT ☆☆☆

Every once in a while a person enters the Amateur community who makes an immediate difference to his club and his peers. Such a man is this nominee. Even as a Novice class student, he became the spokesman in thanking the staff instructors. Since then, his contributions to the hobby and his radio club would impress any of us who consider Amateur Radio a public service.

At biking, swimming, walking, and at running events, he was on station, among the volunteers, and was often on the coordinating crew. At special events, he and his gear were on hand, including "First Night Annapolis" and Field Day.

He has included CW in his activities, and is on the instructing staff of the Maryland Slow Net. He operates Packet Radio and is active in the National Traffic System.

He is on the Board of his 400 member club, and has been Treasurer for over two years. He also maintains the membership list and produces the roster for the club, and labels for our monthly newsletter.

Behind every great Ham, there is an understanding, cooperative wife. Since Sherry was on hand anyway at many of the club events, he "recruited" her into the amateur ranks.

Finally, guess who was one of the coordinators of the club Field Day this year? He prepared an operating "package" and a briefing for each of the station managers, as well as managing a station himself. For all of the reasons above, and because he sets such a fine example for all of us, I am pleased to nominate Bob Baltz, N3MNT as the FAR Ham of the Month.

## Ham OF The Month - CRITERIA

The following guidelines are for nominations for FAR Ham Of The Month

**QUALIFICATIONS:** ANY licensed Amateur in the greater local area who has contributed significantly to the Amateur service or its image in the community.

**REQUIRED INFORMATION:** 1. Name, call and address of the nominee. 2. Description of the contributions which have been made by the nominee. 3. Name, call and phone number of person/s making the nomination.

**FORMAT.** Narrative form is preferred. We would like the finished article to be no less than 250 words and no more than 500. In some cases the FAR nominating committee may be in touch with the person who submits the nomination, for more information or for clarification.

**AWARD PRESENTATION:** Whenever possible, Ham of the Month awards will be presented by a FAR representative at a local club meeting of special activity.

There are over 70 clubs within the Foundation and there are hundreds of "special" people deserving of recognition. Send your nominations any time throughout the year. Selection of one candidate will be made in any given month and additional nominations may be held for consideration in a later month. Please send all nominations to the committee chairman Tony Young, WA3YLO - 12016 Long Ridge Lane, Bowie, MD 20715.





## Elmer's Corner

By Paul E. Wilkins,  
AB4CY

### MODULATION

Modulation is the process of introducing a change to modify a characteristic to provide additional information content. Changing your voice in loudness, pitch or inflection is modulation. In a sense CW is a modulation which turns a signal on or off to convey information by a prearranged code. However, we generally think of modulation in ham radio as a way of adding voice to a carrier signal.

An AC wave form has only four properties that can be changed: on and off, the amplitude, the frequency, or the phase. On/off is the simplest (often called ICW which stands for interrupted continuous wave), and the first modulation to be employed extensively to impress a voice signal on a carrier wave was amplitude modulation, AM.

Commercial broadcast stations on the 500kHz to 1600kHz band all use AM as do most short-wave broadcast stations. The first commercial broadcast station was KDKA in Pittsburgh which went on the air in 1920 with a power output of 50 watts to "broadcast" election reports.

The AM is generated by adding to (or subtracting from) the carrier wave by varying the supply voltage to the final amplifier at an audio rate. One hundred percent AM is achieved when the added power doubles the carrier output power level on peaks and reduces the carrier power output to zero on negative peaks.

AM produces a curious side effect in that it creates new frequencies in what are called "side-bands" which appear on each side of the fixed carrier frequency. The side bands are separated

from the carrier frequency by the audio frequency which created them. For ordinary voice communication this amounts to a frequency band from a few hundred Hz to 3.5 kHz.

It was recognized in the 1950's that the upper and lower AM side-bands contained identical information and the carrier served only as a reference. When only one side-band was used, single side-band resulted, and if the carrier reference was eliminated, single side-band suppressed carrier (SSBSC) signals resulted. This is the most prevalent HF modulation system in use today. It cuts the AM bandwidth in half and eliminates the heterodyning of carriers that used to be the bane of 75 meter phone during busy periods.

SSB has not been introduced into commercial broadcasting because of the necessity of accurately reinserting the carrier reference at the receiver. If the injected carrier frequency isn't almost exactly right you get the Donald Duck effect of offset garbled audio frequencies.

The other principal modulation method is frequency modulation, FM. This is simple (and inexpensive) to accomplish but didn't come into use until the late 1930's, just before WW2. Because it generates wide side-bands, it was relegated to the VHF bands where there was plenty of frequency spectrum.

Today, the commercial FM band occupies 88 to 108 MHz and stations occupy a 75kHz bandwidth about ten times the bandwidth of an AM station. Except for the highest portion of ten meters FM is used on two meters and up. Almost all hand helds today use FM.

Phase modulation, PM, behaves a little like FM except that the bandwidth is somewhat narrower. It has not seen extensive application for amateur or commercial uses.

Pulse code modulation, PCM, is similar to CW

*Continued on next page*





## Traffic Fun

By Geri Sweeny,  
N4GHI

sales person. Most are very nice and really happy to get the message. Some will send a reply message. You meet some very interesting folks delivering messages.

The final step in the National Traffic System is delivering the message to the addressee. This is also one of the most gratifying phases of the NTS. We should do it in a clear, professional manner, so that the addressee will digest the full meaning of their message and not wonder what it all meant after they hang up the phone.

It's good to open by identifying yourself. "I'm an amateur radio operator with a message for Tom Jones from Bill Smith in Dallas Texas." Tom says he's Tom and/or the person you are speaking with says s/he is a friend and can give the message to Tom. You read the message slowly and ask if they have any questions. They may want to know more about the amateur radio part. They may want to get a pencil and write the message down.

The final step is to ask if they would like to send a reply. You should mention that it's free. If they haven't asked anything about amateur radio yet, you could explain how it works and when the message should get there. If they do not wish to send a message, you might ask them if they want your phone number, in case they wish to send a friend a message at a later time.

You will meet all sorts of people - just like in life. A few are curt and seem to confuse you with a

The biggest misfortune is to have a message and not be able to deliver it due to an incorrect phone number. More and more folks are not listing their numbers and/or use an answering machine which does not identify a name. The two most important parts of a message are the name and phone number. It's essential for the relaying station to get these right. If the person is already an amateur radio operator, they may want information on where a traffic net meets (2-meter, or HF).

If the person decides to originate a message, they may take 50 words to express their thoughts. You can eliminate a lot of their words to keep the message count down without changing the thought content. For instance, they might start a message: "Dear Dave", which isn't necessary to include - this isn't a letter. They might ramble: "I miss you x I love you x" This could be combined as: "I love and miss you" And, there are the ARRL numbered messages. The bottom line is to let one person know another person cares enough to send a message to them.

Send someone a message. A few phones numbers in the area to let you know where, how, and/or do it for you. Arlington: KR4MU (538-4959); Alexandria: N3PDK (671-2627); Woodbridge: N60D (703-590-3884), Reston: N4ABM (860-0512) and KE4DXA (713-4136). Are there any Maryland and/or DC traffic handlers who read this article? Let me know: N4GHI (703-360-3773).

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### *Elmer's Corner, from page 14*

and is used primarily for data transmission. Pulse position modulation, PPM, where the placement of pulses in a string encode information is used in telemetering systems.

Modulation may be modulated by a second

carrier known as a subcarrier with its own modulation. With this system a single carrier can accommodate a number of subcarriers which are separated at the receiver by filtering and separate detection. The term multiplex is also used to describe a type of subcarrier modulation. This is how the two channels of FM stereo are transmitted on the same carrier.





## FAR Meeting Minutes June 14th Takoma Park, MD

Chuck Sommer, President called the meeting to order at 8:05 p.m. The minutes were approved as mailed except for a difference in the AutoCall balance which was corrected.

The treasurer's report was read and approved for filing.

Tony Young reported that AutoCall is doing very well and there were no complaints at the last hamfest. People are happy with the new AutoCall. There were 46 new or renewal subscriptions at the last hamfest and one patch was sold.

Please note: Every club that is in FAR is allocated one full page in AutoCall and their club column may contain whatever they wish; whether it be meeting minutes, activity reports or club activity information.

It was asked that the trustees from each club let their club presidents and newsletter editors know about AutoCall and encourage them to submit a club column.

John Queen was congratulated on the excellent job he has done for the last quarter.

Chuck delivered the Scholarship and ARRL reports on behalf of Hugh Turnbull who was working with the scholarship committee to review scholarship applications and could not make it to the FAR meeting.

Chuck reported that there are 150 applicants who are eligible for scholarships and the committee will make the selection of the 56 awards by Friday.

Chuck, on behalf of Hugh Turnbull, made the ARRL report. Chuck told us that it does not look like the vanity calls will be ready until September or October.

Survivor's Assistance — Tony Young has been very busy in Maryland and has received and sold a lot of equipment for survivor's assistance recently. He has more equipment coming in.

Tony and John Swafford, the Virginia Survivor's Assistance Committee member, will make a list of equipment that they have for sale each month and bring it to the FAR meetings.

Bill Grenfell's estate equipment proceeds was split between the Foundation's general fund and the Scholarship Committee account. This has been closed out with the scholarship committee receiving \$60.00 last year and \$33.00 this year.

John Swafford reported that he is still dealing with Mrs. Foreman in Virginia and will have an ad in the August AutoCall concerning the equipment from this estate.

Al Brown reported that everything is moving very smoothly as far as FARFest is concerned. We still need volunteers and helpers both now and at FARFest.

So far, the major prizes have been secured, the hourly prizes are being taken care of, the vendor letters are out and responses are being received. The facilities and phones have been secured, the special events station with Norm Chipp's (N3RZU) AM amateur radio station and HMMMVEE

*Continued next page*



(Hummer) will be in place.

The PA system is being taken care of, but Tony Young will need some help on the Friday before FARFest (September 8). The parking situation is being taken care of. Gates and tickets are being headed up by John Klim and Hugh Katz. The Mid Atlantic DX & Repeater Association will be taking care of hospitality.

The next FARFest meeting is Wednesday, June 21 at 7:30 p.m. at the Prince Georges' County EOC just off Central Avenue, 1-1/4 mile inside the Beltway on the right.

### OLD BUSINESS

Tony Young has reinstated the Ham of the Month in AutoCall. Nominations and articles are being accepted for future months. Send nominations to Tony Young, WA3YLO, along with pictures. If your club would like to recognize any members who have done any exceptional work, this would be a good way to recognize them. Their picture and an article about them will run in AutoCall if they are selected as ham of the month.

Tony Young reported that the scholarship committee received its overhead projector on May 26. This was the last in the list of items that the committee needed to process scholarships.

### NEW BUSINESS

Updated Applications — MD FM Association presented Joe Hanley and John Elgin as its new trustees. They were voted on and accepted by the FAR trustees.

QCWA Chapter #91, Vic Clark sent in its update sheet with its current trustees John Swafford and John Kelleher.

Millie Mumford suggested that a cover letter be written and attached to the update forms so that these can also be used for applications for new clubs. This was agreed upon by the trustees and

Chuck will write a cover letter. These cover letters and application forms will be available at hamfests. Note: The Friendship Club is now the Historic Electronic Museum Amateur Radio Club.

It was moved and passed that the circulation manager of AutoCall, John Swafford, be given a \$25.00 increase in monthly "salary." Postage, gasoline and many other costs have increased in the years that John has done this job and he has not been given an increase to cover these additional costs.

Al Brown asked that any corrections or updates to the e-mail list of the trustees be sent to him at either WA3FYZ@WB3V.MD on packet or at eab@voa.gov on the Internet.

John Queen made a proposal to change the current rate for shack sales from \$.03 per word to \$.05 a word with a \$2.00 minimum. This is needed because it costs more to print the ad in AutoCall than these ads sell for. The trustees moved and voted that the proposal be accepted.

### SPECIAL NOTE

The August meeting will be a picnic style meeting at Greenbelt National Park. More information on the picnic will follow in July's minutes and the August AutoCall.

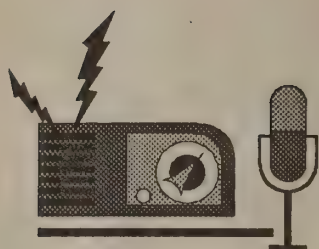
[Editors note: The location for the August meeting was not confirmed at press time. Contact FAR President Chuck Sommer at (301) 249-6544 or FAR Executive Vice President Al Brown at (301) 490-3188 to confirm location for the August meeting. The meeting will be held on Wednesday, August 9th at either Greenbelt National Park or FAR's regular Takoma Park location, see page 6.]

The meeting was adjourned at 8:50 p.m.

Respectfully Submitted,

Vikki Gigante, KA3PVS  
Secretary





## DX DX DX

By John Kanode,  
N4MM

### FULL SCALE AMATEUR RADIO OPERATION FROM NORTH KOREA SOON

Several months ago, there was a demonstration of Amateur Radio in North Korea. Martti Laine, OH2BH and Olli Rissanen, OH0XX were the operators. They made about 20 QSO's with stations mostly in the Asian area. They have been invited back by the officials in North Korea for a full scale Amateur Radio in the near future. The calls P51XX and P51BH will be used. Martti and Olli have to make a trip back to their home country, Finland to take care of business before they can return to North Korea for this larger operation. Look for something big to happen from there in the next couple of months.

Full documentation of the recent P5/OH2AM operation/demonstration has been submitted to the ARRL Awards for approval. This is quite an historic occasion, as North Korea will be the last UN member country to be added to the ARRL DXCC List. Prior to the P5/OHZAM operation, there has been no known authorized Amateur Radio from North Korea. It seems to appear that North Korea would like to be a player in the international Amateur Radio community.

Amateur Radio is growing very fast in other countries in the area and it appears they want to be in on the action. It is reported that North Korea will send a delegation to the Beijing DX Convention, which will be held on October 13-16, 1995.

In regards to the Beijing DX Convention, it will be held at the China Resources Hotel. There will be DX meetings, lectures and forms. A DX

Dinner will be held with a acrobatics show. Special event station, BT1DX will be available to foreign operators to use. Bill Kenamer, K5FUV from ARRL HQ will be attending this event and if anyone is interested in going, he has all the info.

### UPCOMING DX CONTESTS

YO DX Contest	August 5-6
SEANET '95 SSB Contest	August 19-20
European DX Contest CW	August 19-21
KCJ Contest (Japan) CW	August 19-20
SARTG WW RTTY Contest	August 19-20

### TIDBITS

International postage rates from the US to other countries will increase on July 9, 1995. One-half ounce to Canada will be 46 cents with the one ounce rate being 52 cents. Mexico will be 40 cents for one-half ounce and 46 cents for one ounce. Letters to all other countries will be 60 cents for one-half ounce and \$1.00 for one ounce.

The fourth annual New Orleans International DX Convention will be held on August 25 and 26 at the Royal Sonesta Hotel. Contact K5KR at 504-837-1485 for more information.

The RSGB 1995 International HF Convention will be held on September 9-10, 1995 at the Beaumont Conference Centre near Heathrow Airport. There will be DX programs and a IOTA program plus other events. For more info, send a SAE to Marcia Brimson, RSGB HQ Lambda House, Cranborne Road, Potters Bar, Hertfordshire, EN6 3JE, UK.

Citing an earlier announcement of an operation from Mount Athos (SV/A) in July, 425 DX News now reports that no permission for an operation has been granted by the Mount Athos Community.

John Reisenauer, NL7TB has started a US Islands Awards Program, aimed at islands in rivers, lakes and some salt water islands. Detailed

*Continued next page*



### ***DX DX DX, from page 18***

information is available from John for \$5.00 or eight IRC's. This info includes island criteria, a listing of current islands activated and awards offered. Contact John at Route 2, Box 2161, Benton City, WA 99320. [Editors note: Sounds like this is a spinoff from the IOTA Awards program].

The 1995 W9DXCC Convention will be held on September 9, 1995 in Rolling Meadows, Illinois. Info is available from Chairman Michael Zeug, K9EC, 9 North 317 Corron Road, Elgin, IL 60123.

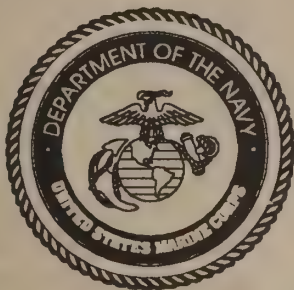
The FCC has released a Report and Order No. 95-3 in regards to Amateur Vanity Call Signs. It reduces the fee to \$30.00 per license for the ten year license term. This new fee (along with other fees affecting other services) takes effect 90 days after publication in the Federal Register, which means not before late September.

Some 140 stations in Spain are now authorized to operate six meters using up to 30 watts of CW

or SSB between 50.0 and 50.2 MHz. These stations change their prefix from EA to EH when operating on 6 meters.

There has been some good DX worked on 6 meters during the month of June. New England amateurs have been blessed with super openings to Europe. Some of it did make it into our area. Some DX worked on 6 recently has been OX, P4, G, GM, GW, GD, DL, PA, ON, LX, F, I, OK, SM, EH, CT and others. Who said 6 meters is dead at the bottom of the cycle?? This is a very strange band with many not fully understood propagation modes.

Many years ago when I made the motion at the ARRL Board of Directors meeting to create a 6 and 2 meter DXCC program, I was told by many that it would take many years for anyone to get DXCC on 6 and it would never be done on 2 meters. To date there are about 5 DXCC's issued for 2 meters and over 150 on six meters, with some as high as 130 countries confirmed. I wonder where these people have their heads now??



## **Needed: A Few Good Men and Women**

(Like about 80) to provide medical/support communications via ham radio for the 25th annual . . .

# **Marine Corps Marathon**

**0530-1530 (+/-) On Sunday, October 22nd**

To volunteer, contact **Allen Bosch, KD4FRK, at 703-533-8377.**  
A volunteer HOTLINE is being established to handle future telephone inquiries.

**This Will Be The Biggest Marathon Ever, So Lots of Help Is Needed.**





# Amateur Radio Newsline

Compiled by  
John Queen  
KAØSEY

## FCC RIP — NOT YET

Is the FCC on its way to oblivion? A think tank with ties to House Speaker Newt Gingrich released a proposal to dismantle the Federal Communications Commission and replace it with a small executive branch office.

The plan would turn over the nation's airwaves to broadcasters, cellular companies and other current holders of FCC licenses. Future licenses in all services would be sold to the highest bidder. How could such a sweeping change impact on Amateur Radio?

Whatever support amateur radio gets from the FCC now would be a thing of the past if the Commission is dismantled. That's one opinion voiced by an opponent of the Progress and Freedom Foundation's plan. The foundation proposes to drastically reduce the Commission's staff which numbers about 2,200.

Perhaps most significant to amateur radio, all FCC rules and regulations including Part 97 governing the amateur service would be phased out. The foundation's idea is getting thumbs down from Alabama ARRL Section Manager Tom Moore, KL7Q.

The Foundation proposes setting up a new office of Communications. It would oversee privatization of the airwaves. Many federal laws would be repealed, with most of the FCC's regulatory responsibility being transferred to the states. Anti-trust regulators would take over some

functions. Moore believes amateur radio would be a loser under the think tank's plan.

Hams aren't the only ones who don't seem to like the idea of dismantling the FCC. The proposal is also drawing criticism from Commission Chairman Reed Hundt. And the FCC is far from being down and out. Representative Edward Markey of Massachusetts, the senior Democrat on the House tele-communications panel says that Congress is considering legislation that would give the FCC even more power and influence than it has right now.

## BALTIMORE FOB CLOSES

Meanwhile, further cutbacks are taking place at the FCC. This with word that the Commission is closing its Baltimore field office effective June 19. Baltimore is being consolidated with the nearby Laurel, Maryland facility as a part of an ongoing government austerity move.

## FCC HOME PAGE

And the Federal Communications Commission has set up a FCC Homepage as an entry point to the Commission's new on-line resources. The page features selectable buttons to go directly to high interest items such as the Daily Digest, the Commission Agenda, Auctions, and current rule makings. To access it, simply type <http://www.fcc.gov>. Once on-line, there also is a button called Getting Information. Clicking on it provides a tour of what information is available and where it can be found on the site. It provides links to available on-line documents. There also is a link to the FCC telephone directory. A general mailbox for electronic mail to the FCC is also available on the Internet. Its simple. Type [fccinfo@fcc.gov](mailto:fccinfo@fcc.gov).

## ARRL RESPONDS TO RFI PROPOSAL

The ARRL has commented on an FCC proposal to deregulate the equipment and testing requirements for personal computers, peripherals,

*Continued next page*



and individual components as outlined in ET Docket No. 95-19. The proposal made in February would not change the substantive regulations governing unintentional emissions from Class B digital devices, and there is no proposal in this proceeding to increase the amount of permitted RF energy from personal computers, peripherals or their components.

Theoretically, says the League, radio amateurs will not be affected by this proceeding. This, not withstanding the fact that the Commission's certification procedure is specifically intended to ensure that unintentional radiator devices not cause interference to radio services such as broadcasting, aeronautical and maritime communications, and the Amateur Service.

But the League did express concern that the FCC was proposing to give up oversight that in the past has kept interference from Class B computing devices to radio receivers within practicable limits. This is a special consideration now that many radio amateurs have PCs as permanent parts of their stations.

The League said it was important that the FCC reaffirm its intention to increase enforcement against noncompliant devices. The League said it is the concern of the amateur community that new testing procedures could allow on the market more devices that either are not tested, do not meet RF emission requirements, or both.

Finally, the ARRL also noted that since Class B PCs can malfunction due to close-by RF fields, that every unit carry a Declaration of Conformity to identify where the owner can go for assistance in getting the device to function properly in the presence of an RF field.

### **NEW SAREX LAUNCH DATES SET**

NASA managers have set new launch dates for two Shuttle Amateur Radio Experiment missions scheduled to fly this summer. Space Shuttle Discovery on Mission STS-70 launched on July

13 and Endeavour is set to be launched on Mission STS-69 on July 30. The new target launch dates for Discovery and Endeavour were established after the launch team finished assessing the impact of a decision to roll Discovery off Launch Pad 39-B.

As previously reported, the rollback was required in order to make repairs to the foam insulation on the external tank caused by woodpeckers eating away the outside foam insulation. Also, there is a SAREX operation scheduled for the STS-71 Mir Rendezvous mission which should be underway.

### **NH TOWER BILL SIGNED**

Word that New Hampshire Governor Stephen Merrill has signed into law a bill protecting amateurs' rights to antennas. The bill, HB 379, earlier passed both the state's House and Senate unanimously and was signed by the governor on June 5th. It was originally written to include slightly stronger language regarding antennas than that contained in PRB-1. The language was then fine-tuned at the suggestion of members of the legislature who are friendly to Amateur interests.

### **3rd PARTY TRAFFIC FOR SPECIAL OLYMPICS**

Some international third party traffic will be permitted to and from the upcoming Special Olympic Games. This, as a result of efforts made by Peter Vekinis, KC1QF to the appropriate authorities in Germany, Ireland and Greece.

All have agreed to permit 3rd party messages for the duration of the Special Olympics, to be carried by licensed radio amateurs for the benefit of families and friends related to the event. Messages are limited to either voice or data, maximum of 2 minutes in length, between radio clubs in the countries concerned and must only be a personal or technical nature or related to the

*Continued next page*



Special Olympics. The games will be held in Connecticut from June 26th to July 7th.

### LOST SATELLITE LOGS

VE2VB, of Quebec Canada has reports that he lost a computer file containing logs of some of his recent satellite contacts. Benoit says that he made about 30 contacts on AO-10 and AO-13 in the month of April.

He asks anyone who may have worked him during this period to contact him so he can build his log up again and issue QSL cards to those who need them. Benoit can be reached on packet radio at VE2VB at VE2CLJ or via the Internet at: [ve2vb@mtlgw.ampr.org](mailto:ve2vb@mtlgw.ampr.org). His postal address may be found in any Callbook from 1987 on.

### HIGH SCHOOL STUDENT PAYLOAD LAUNCHED

A suborbital space payload, the first built and managed by junior and senior high school students, was successfully launched on a NASA sounding rocket on Friday May 12th, from NASA's Wallops Flight Facility, Wallops Island, VA. The launch culminated a year-long aerospace course that took 79 Florida students in the 1993-94 school year through an academic program that taught them hands-on rocketry, including payload development, data analysis, flight electronics, flight dynamics, data transmission and optics.

The students were from Cocoa, Melbourne and Palm Bay High Schools and Southwest Junior High in Palm Bay, FL. The project is a cooperative venture between NASA, the State of Florida's Technological Research and Development Authority and the University of Central Florida.

The rocket, a ten-foot tall Super Loki-Dart flew to 45 miles altitude to transmit data back to Earth. Its mission is to prove the value of small, inexpensive meteorological rockets as tools in remote optical sensing.

### MANUFACTURER UPSET WITH QST STORY

Telex Corporations Steve Morris K7LXC is angry with the American Radio Relay League over an article in the April issue of QST Magazine and he has made his frustration known to other members of the ham radio business community.

According to the May 15th W5YI Report ham radio newsletter, Morris vented his anger with the QST article at the Amateur Radio Industry Group meeting held in conjunction with the recent Dayton Hamvention.

There says W5YI, the Telex representative gave a presentation that was extremely critical of an article that he says urges new hams to shop for equipment using 800 telephone numbers rather than patronizing local dealers. Morris said that he strongly objected to the League publishing an equipment purchasing system that he considers as being detrimental to the amateur radio equipment supply industry. This, because it plays one mail order firm against another.

The ARRL has not commented officially or publicly on Morris comments and it is very unlikely that they will. This, based is the long standing albeit unofficial policy of never to commenting on matters of internal policy.

Also, there is another question to be answered. That being if W5YI did the proper thing in publishing the story in the first place.

Since its inception, the industry association has had a rule that says matters discussed at these meetings are considered as being top secret confidential. Like a closed board of directors meeting of a private corporation.

As such, the ham radio press is there only as an unofficial guest. Those press people who attend have long known that they are supposed to leave their reporters note pads at the door or not bother to walk in.



Relations Assistant Jennifer Hagy, N1TDY, ran things, along with Mike Nikolich, N9OVQ, of the public relations firm Tech Image.

For most in attendance, it was their first change to view the new ARRL video Friends for Life, that will be available soon. The 8-minute film, directed by Jennifer Hagy, is a "speaker's companion" for amateurs to show to groups of nonhams, and is primarily interviews with amateurs who describe the positive influence that the hobby has had on their lives.

\*The FCC has instituted an FCC homepage on the Internet World Wide Web (<http://www.fcc.gov>) as an entry point to the Commission's on-line resources. The page features selectable buttons to go directly to high interest items such as the Daily Digest, the Commission Agenda, Auctions, and current rule makings. There also is a button called **Getting Information**, providing a tour of what information is available and where it can be found on the site. It provides links to available on-line

documents. There also is a line to the FCC telephone directory. A general mailbox for electronic mail to the FCC is: [fccinfo@fcc.gov](mailto:fccinfo@fcc.gov).

\*As of June 1 the ARRL HQ HIRAM BBS is once again accepting uploads, at 203-594-0306. Uploads will be transferred to the appropriate File Area (or to HQ staff as requested) by SYSOP Jay Mabey, NU0X

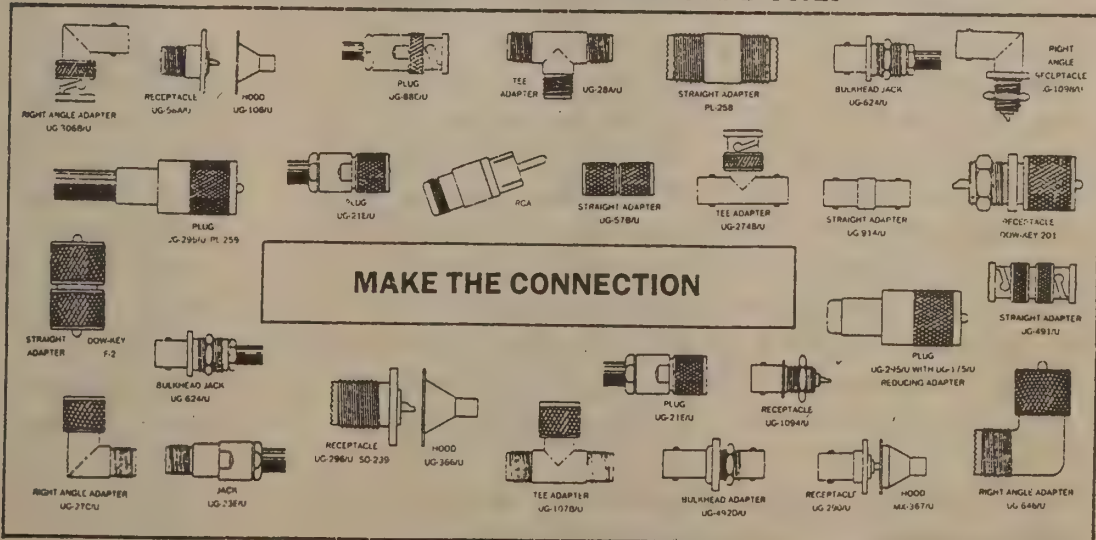
\*Bencher Inc announced on June 1 that it has acquired the business assets of Butternut Electronics Inc. of Olmito, Texas. Bencher said it would continue to make Butternut products at the Olmito facility and would market them through the existing Bencher network of Amateur Radio dealers.

\*The Charlotte (North Carolina) VEC, which served amateurs in the 4th call area for nearly 11 years, is disbanding, its two most active volunteers—Mary, WC4T, and Clyde, KF4WY, Weddle—citing health reasons. Charlotte VEC

*Continued on page 54*

# The R.F. Connection

*"SPECIALISTS IN RF CONNECTORS AND COAX"*

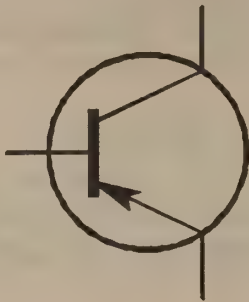


**MAKE THE CONNECTION**

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301-840-5477

~280





# Amateur Radio Training Classes

John Forrest WZ4A  
6111 Burnett St., Alexandria, VA 22310  
(703)971-3905

## Class Announcements

**NO-CODE TECHNICIAN/NOVICE CLASS:** The Mount Vernon ARC and the First Christian Church (Alexandria) Boy Scout Explorer Post will present an entry-level amateur radio training course leading to an FCC Novice and/or Technician license. Morse code instruction will be available. The class will be held in Alexandria beginning in September. There is no charge for the class; however, students will be required to provide their own study materials at a cost of approximately \$25. For info, contact John Forrest, WZ4A at (703) 971-3905 or Bill Schmitt, KD4CNS at (703)768-5709.

## Club Training Contacts

Alexandria RC	Rich Adamy KA4GFY	(703) 644-3920
Anne Arundel RC	Tony Young WA3YLO	(301) 262-1917
Arlington ARC	Fred Bardsley WD4DHW	(703) 533-0372
Antietam Rad Assn.	Robert Long KD3JK	(301) 824-5132
Baltimore RATS	Joe Chidester W3SHZ	(410) 602-0353
Baltimore ARC	Essex Community College	(410) 780-6854
Fauquier ARC	Neil Spokes AB4YK	(703) 364-3861
Frederick ARC	Steve Bauman W3FOA	(301) 662-4552
Herndon Rep't Gp	Michael Weber WB8RDN	(703) 450-2304
Laurel ARC	Pud Reaver W3DQI	(301) 498-6293
MADRAS	Larry Ziecheck N3GKZ	(301) 984-6113
Montgomery ARC	Rocky Jones KC4UXO	(301) 216-5210
Mt. Vernon ARC	John Forrest WZ4A	(703) 971-3905
NASA/Goddard ARC	Vikki Gigante KA3PVS	(301) 249-2609
Ole VA Hams ARC	Charles Dale WA4YGI	(703) 361-3091
Pentagon ARC	David Boyd K9MX	(703) 659-6241
St. Marys Co. ARC	Peter Butt WA3UMY	(301) 862-2214
Shenandoah Val ARC	Guy Black W4PSJ	(703) 722-4952
Southern MD ARC	Vic Curtis WA3YUV	(301) 888-1388
Southern Pax ARC	Dwayne Kincaid WD8OYG	(410) 586-2177
Stafford Adult Ed	Jerry Mullinix AC4HK	(703) 659-3905
Sterling Park ARC	Forrest Snyder N4UTY	(703) 430-4149
Tri-County ARC	John Creel WB3GXW	(703) 572-5124
Vienna Wireless	Paul Wilkins AB4CY	(703) 560-2779
Woodbridge Wireless	Cliff Deel KO4FM	(703) 491-0841





## Volunteer Examiner Cooperative

JOHN FORREST WZ4A  
6111 Burnett St.  
Alexandria, VA, 22310  
(703) 971-3905

\* Effective July 1, 1995, the Advanced Class written exam question pool (Element 4A) changed. Since the question pool has not been changed for many years, significant changes are anticipated. Be sure to use study materials appropriate for the current question pool.

\* The maximum exam fee has been raised by the FCC to \$5.90.

\* Copies of the complete (as of date) 1995 VEC Exam schedule from the *Auto Call* database are available. To obtain a copy, please send a large, self-addressed envelope with sufficient postage to cover 10 letter-size pages along with \$1.00 to cover copying costs to WZ4A at the above address.

## 1995 Schedule of Examinations

<b>August 5 (Saturday)</b>	<b>Sterling, VA - Herndon Repeater Group (ARRL VEC) Walk-in</b> Contact: Mike Weber WB8RDN (703) 450-2304
<b>August 6 (Sunday)</b>	<b>Berryville, VA - Shenandoah Vally ARC (Hamfest)</b> (Mount. ARC VEC) Pre-Registration Desirable Contact: Leo Patterson KQ8E (304)289-3576 Gay Rembold W3DFW (301)724-0674
<b>August 12 (Saturday)</b>	<b>Alexandria, VA - Mt. Vernon ARC (Laurel VEC) Walk-In</b> Contact: Frank Mackey N4GUS (703) 455-1510
	<b>Cumberland, MD - Mountain ARC (Mount. ARC VEC) Walk-In</b> Contact: Leo Patterson NQ8E (304) 289-3576 Gay Rembold W3DFW (301) 724-0674
	<b>Davidsonville, MD - Anne Arundel Radio Club (Laurel VEC) Walk-In</b> Contact: Bob Israel WC3I (301) 262-5083

**- More examination information next page -**



<b>August 17 (Thursday)</b>	<b>Towson, MD - Baltimore ARC (ARRL VEC) Walk-In</b> Contact: Bob Kennick WB3HNV (410) 426-8255 Mailbox #3468
<b>August 19 (Saturday)</b>	<b>Laurel, MD - Laurel ARC (Laurel VEC)</b> Pre-registration desirable, limited walk-in Contact: John Creel WB3GXW (301) 572-5124 after 6 PM
	<b>Smithsburg, MD - Mid-Atlantic DX &amp; Repeater Association (ARRL VEC)</b> Pre-registration requested Contact: J.M. Vaia WB8VBW (301) 416-8447 Box 110
<b>August 26 (Saturday)</b>	<b>Spotsylvania, VA - Fredericksburg VA VE Team (ARRL VEC) Walk-In</b> Contact: Kelly Shaw AC4MB (703)891-5581 Carolyn Cavanagh AC4SK (703)373-7076
<b>August 29 (Tuesday)</b>	<b>Annapolis, MD - Maryland Mobileers ARC (Laurel VEC)</b> Pre-Registration Requested, Walk-In limited Contact: Lois Turner KA3VVQ (410)647-4178
<b>September 3 (Sunday)</b>	<b>Elkins, WV- Mount. ARC VEC Walk-In</b> Contact: Walter Corley KF8SX (304)637-0506
<b>September 9 (Saturday)</b>	<b>Alexandria, VA - Mt. Vernon ARC (Laurel VEC) Walk-In</b> Contact: Frank Mackey N4GUS (703)455-1510
	<b>Davidsonville, MD - Anne Arundel Radio Club (Laurel VEC) Walk-In</b> Contact: Bob Israel WC3I (301)262-5083
	<b>Culpeper, VA - (ARRL VEC) Pre-Registration Preferred</b> Contact: Bill Brown AC4KP (703)547-3089 Gary W0QDP (703)854-6187

***Don't forget to bring your license when upgrading!!***



<b>September 16 (Saturday)</b>	<b>Laurel, MD - Laurel ARC (Laurel VEC)</b> Pre-Registration Desirable, Limited Walk-In Contact: John Creel WB3GXW (301)572-5124 after 6 PM
	<b>Smithsburg, MD - Mid-Atlantic DX &amp; Rptr Assn. (ARRL VEC)</b> Pre-Registration Requested Contact: J.M. Vaia WB8VBW (301)416-8447 Box 110
<b>September 22 (Friday)</b>	<b>Arlington, VA - The Pentagon - Pentagon ARC (ARRL VEC)</b> Pre-Registration Encouraged Contact: Jim Fox KE4EID (703)756-8994 (Work) (703)931-6523 (Evening)
<b>September 26 (Tuesday)</b>	<b>Glen Burnie, MD - Maryland Mobileers ARC (Laurel VEC)</b> Pre-Registration Requested, Walk-In limited Contact: Jerry Gavin NU3D (410)761-1423
<b>October 14 (Saturday)</b>	<b>Alexandria, VA - Mt. Vernon ARC (Laurel VEC) Walk-In</b> Contact: Frank Mackey N4GUS (703)455-1510
	<b>Cumberland, MD - Mountain ARC (Mount. ARC VEC) Walk-In</b> Contact: Leo Patterson KQ8E (304)289-3576 Gay Rembold W3DFW (301)724-0674
	<b>Davidsonville, MD - Anne Arundel Radio Club (Laurel VEC)</b> Walk in - Contact: Bob Israel WC3I (301)262-5083
<b>October 19 (Thursday)</b>	<b>Towson, MD - Baltimore ARC (ARRL VEC) Walk-In</b> Contact: Bob Kennick WB3HNV (410)426-8255 Mailbox #3468
<b>October 21 (Saturday)</b>	<b>Laurel, MD - Laurel ARC (Laurel VEC)</b> Pre-Registration Desirable, Limited Walk-In Contact: John Creel WB3GXW (301)572-5124 after 6 PM
	<b>Smithsburg, MD - Mid-Atlantic DX &amp; Rptr Assn. (ARRL VEC)</b> Pre-Registration Requested Contact: J.M. Vaia WB8VBW (301)416-8447 Box 110





# Volunteer Examiner Cooperative

## EXAM FEES:

- \* Check for appropriate exam fee. Fees and modes of payment for individual VECs and exam teams may vary.
- \* ARRL VEC exams cost \$5.90
- \* Laurel VEC exams are free
- \* Mountain VEC exams are free
- \* W5YI VEC exams cost \$5.90

## BRING TO EXAM:

- \* Picture identification
- \* Completed FCC form 610 (most VE teams will supply at exam)
- \* Original and a copy of current FCC amateur radio license
- \* Originals and copies of all active certificates of successful completion of prior exams
- \* Exam fee (check or cash depending on VE team)

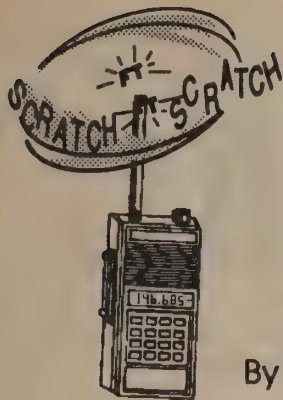
## "GRANDFATHER" CREDIT FOR ELEMENT 3B (GENERAL WRITTEN):

\* If you presently hold a Technician class license which was first issued prior to March 21, 1987, you may be grandfathered for Element 3B (General class written exam) by presenting the original and a copy of the license dated prior to March 21, 1987 to the VE team. It is your responsibility to prove that you are entitled to grandfathering. Do not lose your original license!

## RULES FOR SUBMISSIONS TO THE FAR VOLUNTEER EXAMINER COOPERATIVE:

1. All submissions must be in writing
2. Date and day of week must be specified for each exam date
3. Point of contact and phone number must be specified
4. Sponsor and location must be specified
5. VEC must be specified
6. Exam dates up to 12 months in advance will be accepted
7. Deadline for submission is 25th of the 2nd month prior to publication date (e.g., Sept. 25 for November issue)





# 2 Meters Under Attack!

**Fight Back!  
Here's how...**

By Albert Rabassa, NW2M  
17100 Amity Drive  
Rockville, MD 20855

With the ever-increasing supply of various VHF services, the spectrum adjacent to my favorite repeater is becoming densely populated experience this problem every day as I commute through the areas surrounding Washington, DC. The problem takes on the form of distortion during receive on my 2-meter mobile radio. The interference is so severe that I cannot hear our 100 watt repeater located 1/2 mile away. My radio makes noises and sounds that I never thought possible! Many of our club members also experience the same problem as we excuse ourselves from QSO's for several minutes while passing through this "RF-alley".

The front-end stage on most 2 meter radios must readily amplify RF signals anywhere between 100-200 MHz and beyond! (You paid for this when you "had-to-have" an extended coverage radio! )

As strong signals enter the front-end transistor, the signals may compress/saturate the transistor and "mix" with themselves and their harmonies creating a real mess by the time the sound exits your speaker.

One solution is to limit the spectrum seen by the front-end of a radio in the form of a bandpass filter. (See figure 1). This is a sharply tuned circuit which will pass 2-meter signals and attenuate all others. The "narrowing" effect reduces the signal strength of signals outside of the passband. Even a little help (7-10 dB) in reducing strong out-of-band signals can make a big difference by reducing their ability to saturate our front end.

## Description

The bandpass filter consists of two helical coils resonated by trimmer capacitors in an aluminum enclosure tuned to pass the 2meter band. This filter was first presented in the VHF/UHF Manual, published by RSGB<sup>[1]</sup>. The design was so simple that we used it as a club project where 65 filters were built during two club meetings! We had a blast and never had to excuse ourselves from "RF-Alley" again!

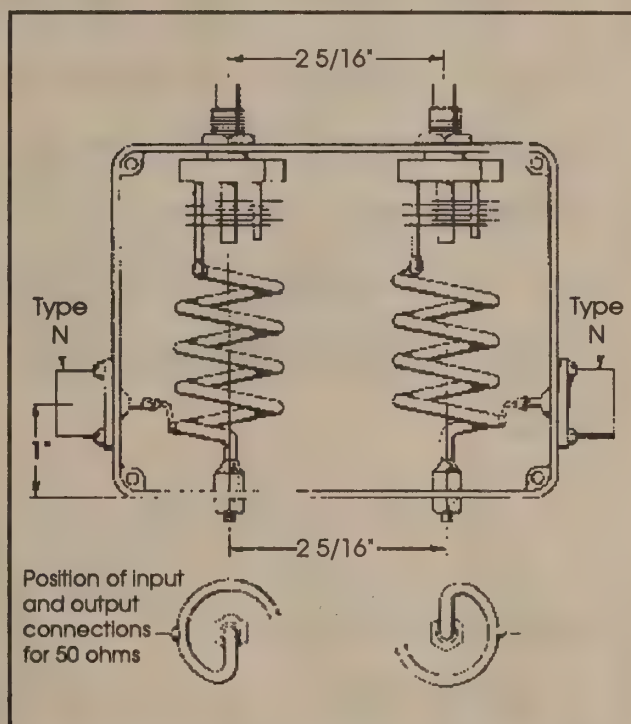


Figure 1 - General arrangement for the filter.

## Parts List

The enclosure is a diecast Hammond 1590C<sup>[2]</sup>, the trimmers are high quality silver plated surplus<sup>[3]</sup> with a tuning range of .5 to 5 pf, the BNC connectors, are quality teflon, and the rest of the hardware (#12 copper wire, nuts and bolts, etc.,) are junk box items.

As a club project, we were able to purchase the parts in bulk for eleven dollars per filter. Hamfest prices are better yet.

*Continued on page 53*



# MARYLAND RADIO CENTER

# MRC

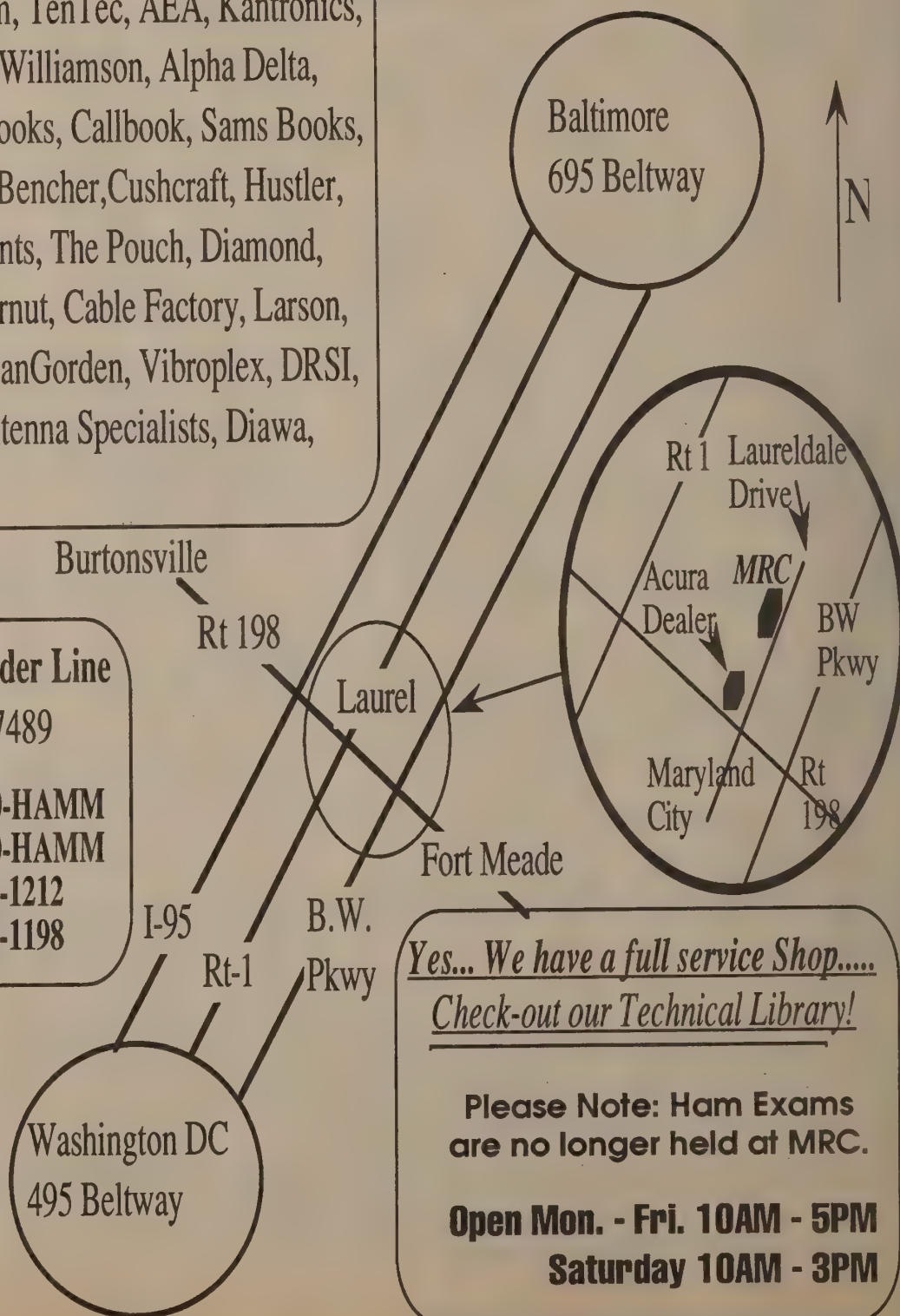
## *Authorized Dealer for:*

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**Please Note: Ham Exams  
are no longer held at MRC.**

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Saturday 10AM - 3PM**



## HONORED GUEST SPEAKERS

### **GORDON WEST WB6NOA**

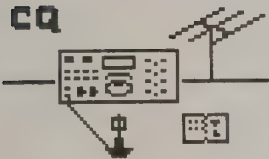
Gordon West has been a licensed Amateur Radio Operator for over 25 years, and also holds a commercial general radiotelephone license with radar endorsement. In his numerous monthly articles in over 17 national magazines, Gordon makes technical explanations fun to read and easy to understand. His recent amateur radio licensing books, sold throughout the country by Radio Shack, have been a sellout. His humorous style of writing encourage learning.

Gordon West is a life member of the American Radio Relay League, and a fellow with the Radio Club of America. His interest and involvement in Amateur Radio has been a benefit to all within the hobby.

### **WAYNE GREEN W2NSD/1**

*Editor/Publisher. . "Cold Fusion" - 73 Amateur Radio Today - Radio Fun - IMPS Journal - Secret Guide to Music - Music Marketing - Declare War Update - Ham Radio Marketing - 20/20 Foresight Record Labels. . Greener Pastures - Green With Envy - NH Language Systems - Adventures In Music - Independent Music Producer's Syndicate. . IMPS Mfg. - Collection CDS - Distributing - By Mail Entrepreneur. . Golden Studios - Uncle Wayne's Bookshelf - Music Books - Music Tees - Mesa Founder - ARRL - QCWA - OOTC - NIAC - NH Tech Council - P Pres. Peterborough C/C And let's not forget my recent book. . We the People Declare War On Our Lousy Government Other interests. . Scuba - Skiing - Cooking - Travel - Parapsychology - UFOs - Submarines - Cameras Musics. . Classical - G&S - Ragtime - Bluegrass - Theater organ - Band organ - Country & Western*

## HONORED DX GUESTS



Bob Eshleman W4DR (#1 SBDXCC)  
Al Hernandez WA3YVN (VP8SGP Dxpedition)  
Chip Margelli K7JA (ZA1A and Cuba) also Yaesu Cruises  
John Kanode N4MM (#1 Top of the Honor Roll)

## SATURDAY NIGHT BANQUET

The committee is again proud to coordinate a banquet on Saturday night for \$19.00 a person. Guest speaker will be Gordon West, Wayne Green, and Jerry Freedman (FCC)

### A Family Weekend

The family will enjoy coming to the show, the largest of it's kind on the East Coast. The beautiful Va. Beach Oceanfront is just 6 short blocks from the Pavilion, and the weather will still be warm enough to get in that last swim of the season. The nearby Oceana Master Jet Base has open house to allow the public a first-hand look at the airplanes that defend our country. The local Tidewater area offers many museums. The following are just a few; Virginia Air and Space Museum, Virginia Marine Science Museum, Life-Saving Museum of Virginia, MaCarthur Memorial Museum and Nauticus. You can see that the Hamfest will provide you with a wonderful weekend for the entire family.

## DIRECTIONS

Take any road to I-64 and follow it to RT 44 (Va. Beach toll road). Take RT 44 to it's end. Just past the Pavilion turn right at stop light onto Park Ave. Make a right onto 19th Street and then use any entrance to the Pavilion Parking lot.





The Summit Amateur Radio Association presents:



## The 1995 Carroll County Computer and HamFest

Sunday August 13th 1995

at the Carroll County Agricultural Center

Located at the end of Smith Ave., Westminster, MD

Tailgating \$5 per space / All inside tables \$10  
DONATIONS \$5

### 8000 sq.ft. OF INSIDE TABLE SPACE

Call for information: KS3L Alan Parker  
(410)859-1475

Tailgating starts at 6:00 AM

General Admission at 8:00 AM

Talk In: 224.68

224.64

146.52

Local Area Repeaters

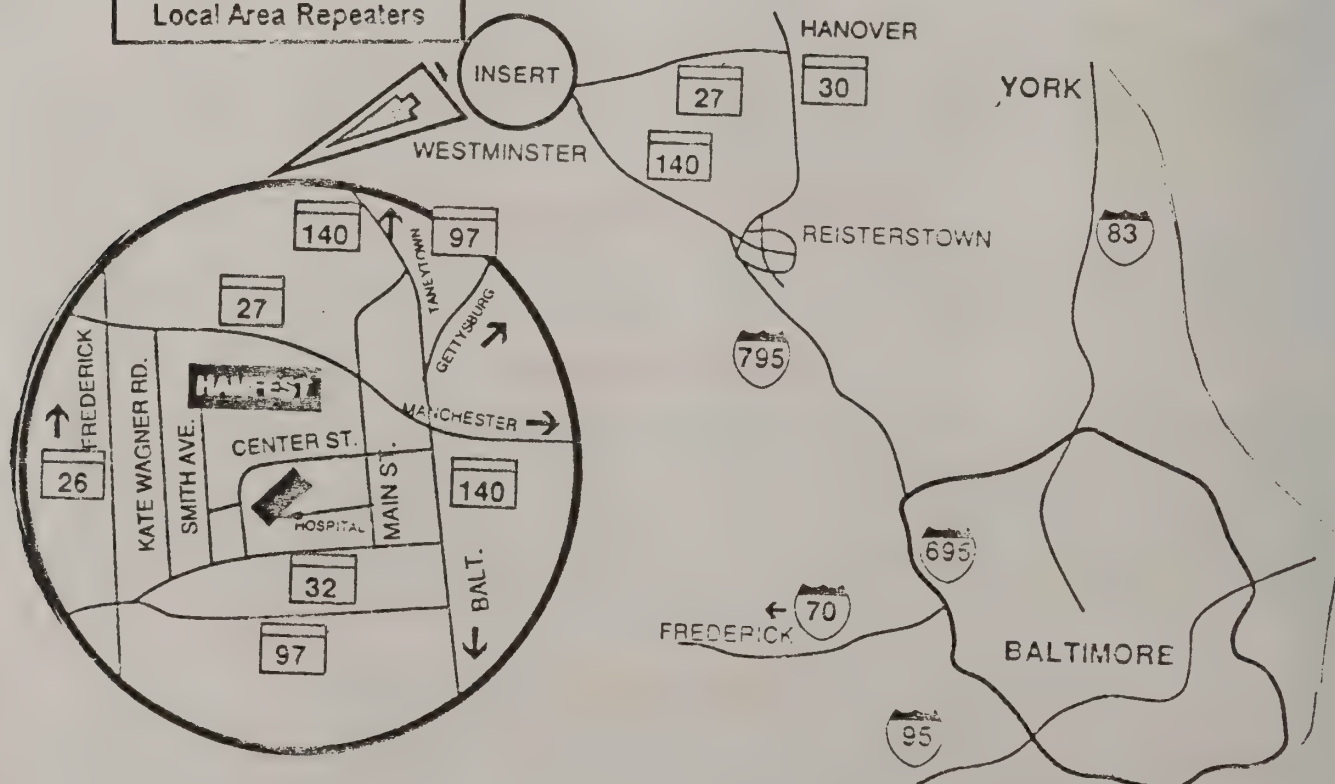
### LARGE TAILGATE AREA

Write for information on  
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## **AMSAT The Radio Amateur Satellite Corporation**

**Local Meetings:** Semiannual in March and September.

**VHF FM Net:** Sunday at 9 p.m. on 146.835 MHz FM, WA3NAN/R, Greenbelt, MD except on government holiday weekends.

**Information:** NCS Pat Kilroy, WD8LAQ, Contact by packet radio: WD8LAQ @ WB3V.MD or by Internet: wd8laq@amsat.org or during weekly net..

### **Latest Orbital Elements and News**

Looking for the latest OSCAR orbital elements for your computer tracking program? I upload the latest AMSAT two-line element (TLE) set to the WB3V packet radio BBS every other weekend or better. I upload the weekly AMSAT News Service Bulletins usually by Tuesday. And late-breaking Shuttle Amateur Radio Experiment (SAREX) information is uploaded as released during space shuttle missions that carry the SAREX payload. This action "seeds" our area's other packet BBSs as well, sometimes long before the information would otherwise reach us.

Remember: Outside of getting the hottest amateur satellite information on our weekly 2-meter FM net, turn on your TNC when you have a satellite question. Answers to most questions can be found by typing L@ AMSAT at the main prompt of your local packet radio BBS. The know-how will more than DOUBLE your fun!

### **Next AMSAT Meetings**

The next local AMSAT meeting will be held in September, possibly on the 17th. Something exciting is coming. There will be a special follow up "splinter" meeting for those who wish to participate in a local amateur satellite project. The splinter meeting is expected to be held a little before

or after the October AMSAT Space Symposium and Annual Meeting. Watch for the announcements starting in late August!

### **Parrot Repeater to Operate on SUNSAT**

HR AMSAT NEWS SERVICE BULLETIN 153.01 FROM AMSAT HQ: A Parrot repeater will soon be operating on the two meter band providing fun communications to Radio Amateurs and scholars throughout the world. The repeater will be incorporated in South Africa's first satellite, called SUNSAT, which is currently under construction.

SUNSAT is a 60 kg, 45 by 45 by 62 cm micro-satellite being designed, built and tested by twenty-two Engineering Masters students at the Electronic Systems Laboratory in the Department of Electrical and Electronic Engineering at Stellenbosch University.

Stellenbosch is the second oldest town in South Africa, not far from the Southern tip of the African Continent. It is about fifty kilometers east of Capetown. The university has about 14,000 students. The satellite is being built by students who have done all detail design and software. System level design was done by lecturers, some of whom studied at the Universities of Surrey, Stanford and MIT. It is therefore not strange that the satellite is very similar to the UoSATs built at the University of Surrey.

Detailed design started in January 1992, led by Computer and Control System lecturers. SUNSAT was originally designed for a sun synchronous-type orbit on the Ariane 4 HELIOS mission, which is ideal for the main imaging payload. When launch costs became prohibitive, alternatives were sought.

NASA scientists have learned much about the Earth by detailed studies of the magnetic field and the gravitational field, and had arranged for the Danish OERSTED micro-satellite to be launched

*Continued next page*



## *AMSAT, Continued from page 31*

as a secondary payload on a USAF Delta II from Vandenberg Air Force Base on the P91-1 ARGOS mission in January 1996. NASA and Stellenbosch have now agreed to carry SUNSAT into the same orbit instead of a counterweight for OERSTED. In exchange for the launch, SUNSAT will carry a precision GPS receiver and a set of laser retro-reflectors. These will enable NASA to study fine orbital perturbations for gravity field recovery, and for cross verification of GPS and NASA's laser tracking network. The orbit will be the same as OERSTED, namely polar, 400 by 840 km. The equatorial crossing will initially be at approximately 15:00, and drift an hour earlier every seventy days.

During the initial stages of the design of SUNSAT, ideas were sought for what should be included in the satellite. Very optimistically, a two meter repeater was suggested as this would be the one item that nearly all amateurs would be able to operate. However, SUNSAT is a micro-satellite and to get space on a launch vehicle, weight and size must be restricted. So, there was no room for the large duplexer that is part of a two meter repeater. A Parrot repeater was then suggested. A Parrot repeater operates by digitizing audio sent to it on the uplink and then storing it in memory, of which SUNSAT has 64 megabytes. When the operator on the ground releases his PTT, the digital record is converted back to audio and fed to the transmitter which is on the same frequency as the receiver.

SUNSAT's Parrot repeater will sample audio at 8000 times per second. Data words will be 8 bit, and records will be restricted to five minutes each. The repeater will periodically announce that it is available for use. The voice system will also be used for transmitting messages which will be uploaded by the command team. [Thanks to Henry Chamberlain, ZS1AAZ, and Hans van de Groenendaal, ZS5AKV, for the information that went into this ANS bulletin item.]

73, Pat WD8LAQ, AMSAT Area Coordinator



## **Anne Arundel Radio Club**

**Meetings:** First and Third Thursday of the month at 8 p.m. at the Davidsonville Family Recreation Center, Queen Anne Bridge and Wayson Roads off Maryland Route 214 near Annapolis.

**Mailing Address:** P.O. Box 308, Davidsonville, MD 21035

**On The Air:** 2030 Thursdays when there is no club meeting on 147.705/105. Tuesdays at 2030 local time on 28.410. Wednesdays at 2000 on 444.400. The Chesapeake Weather & Traffic Net on 147.705/105 at 1100 and 1500 every weekend day and public holiday from April 1 to November 15. MSN (Maryland Slow Net) every evening at 1930 on 3.7170 Mhz.

**Information:** Margaret (Holly) Bevan, 410-923-0229.

Field Day on the grounds of the Davidsonville Family Recreation Center was a great success. Over fifty persons took part. There were six tents for overnights. The stations were manned continuously for the most part. There were stations on 20, 40 and 80, a UHF and VHF station, Novice, Packet and Satellite stations. All bonus points except for a satellite contact were made. Actually a satellite contact was partially made. Names and calls were exchanged, but they were unable to complete the necessary data. All stations operated on low power using batteries charged by solar panels. In the neighborhood of 9000 points were accumulated.

Lois Turner/KA3VVQ and Bob Baltz/N3MNT did a great job as co-coordinators. The group enjoyed a good meal on Saturday evening and a great breakfast on Sunday morning. The weather was unbelievably cooperative. With storms in the surrounding areas, the AARC site remained sunny and peaceful.



The weather was also picture perfect for the annual AARC Family Picnic on Saturday June 17th. About 115 adults and children attended. John Pohlhaus/N3MNM and his XYL Sylvie did a superb planning job. As usual, the food and the ragchewing were great. There were also active games, such as horseshoes and volley ball.

A special treat was the clown and magic show. Club member Bill Riley/N3SNU as the Magician and his XYL Pam as Evangeline the Clown entertained the children (of all ages). Their family business is available for birthday parties, etc.

At the June 15th Club meeting John Kohl/KO4A gave an interesting and informative program on Loop Antennas. It must have been inspirational also, because several club members have been busily measuring their yards to determine the possibilities.

At the Clubhouse on June 10th, Bob Israel/WC3I, Charlie Tiemeyer/W3RMD and Robert Rose/AA3HN gave 27 tests to 16 persons.

Thirteen tests were passed and there were 10 upgrades. Other crew members were: Herb Elkin/KA3FDO, Harlan Ray, III/AA3FE, Tony Young/WA3YLO, Bettye Tiemeyer/K3VRZ and Holly Bevan/N3BMB. The next testing session at the Clubhouse will be on August 12th.

Congratulations to the following upgrades: Steve Werner is now Advanced with the new call KS4YY. Nick Shearin is Advanced with the new call KE3TU. Bob Hecht is Advanced with the new call KE3TV. Diane Ference is Advanced with the new call KE3TT. Mildred Fitch/KC4QYJ is now a Tech+

73, Holly/N3BMB



## Antietam Radio Association

**Meetings:** First and Third Tuesday of the month at 8 p.m. in the Conference Room at the Washington County Regional Airport, Showalter Road, Hagerstown, Maryland.

**Mailing Address:** P.O. Box 52, Hagerstown, MD. 21741

**Nets:** Tuesday 7 p.m. 146.940 MHz.; Wednesday 7 p.m. 447.975 MHz.; Thursday 7 p.m. 147.090 MHz.

**Repeaters:** 147.09+ and 146.94 -.

**Information:** Donnie Sue Mulligan/  
KB3AOO (301) 582-2984

June 4, 1995...beautiful day, not too warm nor too cool. Just right. It was the ARA's Fantastic Fun day and Perfect Picnic at Cowan's Gap State Park in Pennsylvania for HAMs, their friends and families. John Smith/N3TDN grilled hamburgers and hot dogs, which were delicious with all the other food we had. Joshua Cripe, son of Don/KE3MM and Sally/N3MYZ celebrated his third birthday at the picnic with a big cake, some presents, and some well-wishing for other happy birthdays.

We played several games of volley ball; Jim Fisher/KD30 was our referee. Some of the guests were throwing water balloons and getting wetter and muddier by the minute, others went for a boat ride across the lake. We had some enjoyable music played by Fred/N3HTN, Jim/KD30 and Pat/N3PMO.

It was a most relaxing day! Everyone would like to see this kind of picnic happen again... the right day, the right temperature, the right games, the right foods, etc.

Field Day was a good and enjoyable 24-hours on June 24th and 25th. We were at the Potomac

*Continued next page*

Reminder - all submissions for



**AUTO CALL**

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Edison grounds on the Downsville Pike and the ARA wants to say THANK YOU to Stan Klick/W3YGC for the part he played in this field day and to Ed Peters, who gave us permission to use the grounds, and for Troop 26 of the Boy Scouts who grilled hamburgers and hot dogs for us. Much, much more about Field Day in the next issue.

June 27, 1995, 11 of us went to Sterling, VA. for a tour of the Doppler Radar System for tracking weather and/or storms. Chris Strong, meteorologist at the National Weather Service, led us on the tour, answered our questions, and told us many things about the radar and about the weather. Tim Meyers released a weather balloon at 7 p.m. We would like to thank Ray Mongrain/N30DA for his setting this tour up with the NOAA. It was a most enjoyable tour, well worth the trip to Sterling!!

Until next time...

73, Donnie Sue/KB3A00



### Arlington Amateur Radio Club

**Meeting:** Third Tuesday of each month, 7:30 P.M., Red Cross building, 4333 Arlington Blvd., Arlington, VA. Nonmembers welcome!  
**Net:** Tuesdays (except meeting nights), 7:30 P.M., 144.87/145.47 Mhz FM.

**Information:** Mike Callaham, NW3V @ WA3TAI, callaham@CapAccess.org, (703) 241-5618.

**LLBBS:** Area 1 of Beachcomber Joe's BBS (703) 243-0024.

The May meeting of the AARC was called to order at 1934, by Mike, NW3V, our president. Rod Powell, KE4LEZ, from Montgomery, AL, who has attended several meetings, decided to join AARC. Welcome Rod, we hope. that this action does not foreshorten your TDY assignment.

Alan Bosch, KD4FRK who has worked with Tom N4BYF on one event described later was our guest. The minutes to the May meeting were accepted as published with the following amendments: Walt P. KE4NFF, was not in attendance, and Rod, KE4LEZ/AG (congrats!) was in attendance. Tom, N4BYF, our Treasurer reported there were no transactions during the month.

Allen, KE40WH, our Activities Chairman reported the results of the Program Survey that was recently completed. The interest priority was as follows:

- 7 Questions/Answer Session
- 7 Packet Radio Operations
- 6 Weak Signal Operations
- ? Satellite Position

With regards to Satellite Positioning (APRS vs GPS) Dennis W4PWF will contact Bob Benedict concerning a program. Bob is the expert.

Mike, NW3V, said that Gerry, N3EVT and his YF, Mary Elizabeth, have graciously volunteered to prepare Sunday breakfast for Field Day. He proposed that we authorize \$75.00 for food, which was approved by vote. It was suggested that an accounting procedure should be implemented, for the record.

Tom, N4BYF provided detailed information on the 12th Annual Arlington Red Cross/Crystal City, IOK Race/2 Mile Fun Walk on Sunday, May 21. Eight hundred runners/walkers have pre registered and the promoters are expecting up to 1,500 participants and \$15,000 for the Arlington Red Cross.

Tom, will be the NCS, but he needs a few more volunteers. Each control point will have a ham and a race timer, which will be dropped off at the control point by the lead vehicle. Next year, Tom will try to get the AARC logo embossed on the event tee-shirts. Tom, N4BYF also reported that he and Alan KD4FRK had provided ham support for the American Lung Association, Bike Trek 95.



This race covered 150 miles of Virginia's county roads from Woodson High School to Mary Baldwin College. 250 bikers participated, but this was only half the number that participated last year. There were no medical emergencies, but there were several broken bikes and flat tires.

Tom has participated in this event for the past three years. Up until the last minute, they were short operators to support the. five SAG wagons and five rescue vehicles. Tom said that this two day event was a lot of fun and encouraged others to participate next year.

Dennis, W4PWF called the FCC to get the latest information on the Vanity Call Signs. ARRL has completed the printing of the 610V's, but must wait for the FCC to issue the Public Notice and wait 60 days for comments. We rehashed the gates and lifetime call signs.

Mike, NW3V reported on an Armed Forces Day operator event. During this period, Hams can work cross bands with U.S. military stations.

Dennis, W4PWF and Gerry, N4GA reported on their attendance at the Dayton Hamvention, Dayton, OH, on April 28-30. There were over 37,000 people and much too crowded. The flea market covered seven acres! Jerry described a new very large antenna by Mosley.

Mike, NW3V suggested that we start submitting an abbreviated version of our minutes to *Auto-Call*. He will attempt to get our logo transferred to the MRC BBS.

The evenings program included watching the video *What are those Crazy Sound Signals?* This video was taped by W7AXJ and illustrated the various digital signals that are used to send Morse Code and digital communications. It was an excellent video, but unfortunately, your secretary did not get enough notes or understand the details, to write a meaningful summary.

The meeting adjourned at 2115.



## Baltimore Amateur Radio Club

**Meetings:** Meetings: Twice monthly, 7:30 pm at Towson Presbyterian Church, Chesapeake and Highland Aves. in Towson, Md. -First Wednesday of the month -business meeting, Third Wednesday of the month - program.

**Repeaters:** W3FT/RPTR 146.67(-), 224.24 (-) (no PL) and 449.625(-)(PL 107.2) Note: two meter/220 Mhz. repeaters are linked.

**Club Net:** Every Tuesday night at 8:30 pm on 146.67/224.24.

**Club BBS:** (410) 665-7646 (min. 2400 baud)

**Club Voice Mail/Info:** (410) HAMTALK

**Hamfests:** Greater Baltimore Hamboree & Computerfest/Maryland State ARRL Convention information: (410) HAM-FEST or (800) HAM-FEST.

**Mailing:** BARC, Inc., P.O. BOX 120, Reisterstown MD 21136

In August, club meetings will be held at Towson Presbyterian Church, our usual summertime gathering spot. With the coming of the new school year, we will return to Dulaney High School in Timonium, but the exact time of changeover depends on when the school year starts, which in turn governs the availability of the building. Watch this space for more details.

At the June business meeting, BARC held its annual election of officers, who will serve until July 1996. Elected president was Don Baker, N2MCG, with Nick Nicholson, N3LRK, as vice-president. Don and Nick were vice-president and president, respectively, last year. The treasurer remains Nelson Ross, W3BGX, and two new people appear in the roster of club officers: Hale Adams, N3NYC, as corresponding secretary, and Steve Gutknecht, N3RPE, as recording secretary.

June's program was given by Jerry Johnson, WA3WZF, from Maryland Radio Center. Jerry

*Continued next page*



demonstrated a bit of PC software known as Weather Node. I was not there to see it, but many of the members at the meeting were quite impressed with it.

Among other things, it can extract from a database via a phone line maps, forecasts, and reports of current weather conditions for many places around the world. Ted, W3CWN, has been relating the story about how his wife was in Beijing, China, on the evening Jerry showed off the Weather Node system. Ted asked Jerry to call up the information for Beijing, and jotted down what Jerry came up with. The following evening, Ted picked his wife up at the airport and floored her with his knowledge of the weather in China the night before. Thanks, Jerry, for the great program, and a few chuckles besides.

Congratulations to Mel, N3CEG, and his son for winning the June foxhunt. Thanks also to Andy, N3JY0, and Cathy, N3QIX, for playing the foxes. BARC does not yet have a regular schedule of foxhunts, so keep your ears open or check the club's voice mail system for details until a schedule can be set up.

73 de N3NYC/Hale



### Central Maryland Amateur Radio Club

**Meetings:** 4th Friday of the month at 7:30pm, at the New Carrollton Municipal Center, 6016 Princess Garden Parkway, New Carrollton, MD (no meeting in December).

**Repeater:** N3EZD/R 145.230 MHz

**Net:** Every Tuesday, 9:30pm, 145.230 MHz repeater.

**Mailing Address:** Central Maryland Amateur Radio Club, 6016 Princess Garden Parkway, New Carrollton, MD 20784.

**Information:** Oscar Ramsey, Pres - NV3G, (301) 262-3392.

Field Day was CMARC's primary activity during the month of June. CMARC operated as

WB3FGP from the 73rd Court Park on Ridge Road in Greenbelt, MD.

We had planned on operating three HF stations, with one designated as a Novice/Technician station. However, one of our HF station owners had a last minute work commitment and could not participate, so we ended up operating two HF stations with no Novice/Technician station.

It was a rainy day, but Ken Voigt's tarp shelter kept the operators and equipment dry. The rain, however, did limit the number of visitors to our site.

CMARC operated only from 2pm to 8:30pm on Saturday, June 24th. Most of our 53 contacts came in the last 2.5 hours of operation due to antenna problems early on.

We claimed 530 bonus points for 100% Emergency power, Media Publicity, Location in a Public Place, and Information Booth, copying the W1AW Field Day Message, and 3 ARRL members among our operators.

While it wasn't a outstanding Field Day in terms of number of contacts, we had a lot of fun, and eventually did operate an effective field station early on Saturday evening.

73 de Jim/KD3JA



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## Fauquier Amateur Radio Association

**Meeting:** 7:30 p.m., Second Tuesday of the month except July, August and December. Shadow Lawn Recreation Center, Warrenton VA. Next meeting, June 13, 1995.

**Breakfast:** Last Saturday of the month at Big Boy (next to HoJo's) Warrenton, VA. 7:30-9:00 a.m.

**Net:** Every Wednesday, 9:00 p.m., 147.165 Mhz NZ4N Repeater.

**Packet:** FARA7 node 145.070 Mhz with direct connect to FBBS9 Bulletin Board 145.090 MHz, FARA9 node 145.090 MHz.

**Repeater:** NZ4N/R 147.165 Mhz (+0.600 Mhz).

**Newsletter:** TOROID, Monthly. (A complimentary issue is usually available from Warrenton Radio Shack)

**Information:** Don, WY2V, (703)347-5745.

FARA be taking the months of July and August off officially, but will still meet for Saturday breakfast once a month and the Wednesday night net will continue.

Field Day was a success. This year the SSB trailer out QSO'd the CW tent, but still didn't catch them on points. The packet station racked up lots of bonus points. The new "2x4" masts worked great. Bill's bowtie "cloud warmer" worked like a champ. Correction to last month's column: The FARA club call is KE4YVU, not N4YVU as previously reported.

73's Mark, KD6AKC



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## Green Mountain Repeater Association

**Meetings:** Board of Directors, Last Monday of each month.

**Repeaters:** KD3VR-146.61 (Cheverly), K3GXF-146.88 (Greenbelt).

**Luncheon:** First Saturday of each month at the Fountain Cafe, in the Laurel Shopping Center Mall, US Route 1 (Baltimore Ave.) and Cherry Lane. Starts at 11:30 AM.

**Mailing:** GMRA, P.O. Box 429, Riverdale, MD 20737

**Information:** Boyd Nelson - KZ3Z (301) 434-0934

GMRA held it's regular monthly luncheon gathering on Saturday, June 3, 1995 at the Laurel Center Shopping Mall. C.T. - K3GXF and his wife Sue - N3RWI had a count of 44 members, relatives and guests. This was a super turnout and we are looking forward to that each month.

The Board of Directors held their monthly meeting on Tuesday, May 30, 1995 at the home of Kathy, the YL friend of H.D. - N3LFL. All members were present except John, N5SJZ. All control operators were present with the exception of Ken, N3HLY.

The board voted to send a contribution to the widow of KD3KT, Tucker who became a silent key recently. Tuck was a long time supporter of GMRA and will be sorely missed by all.

A general discussion over the replacement of the antenna cable at the 146.61 from the antenna to the repeater shed took place. This will augment the work that was done last summer, within the repeater shed. Replacement of the antenna and fine tuning of the elements was also mentioned to possibly improve coverage to the north and east where most members reside and travel.

*Continued next page*



Murray, K3BEQ has been working with the repeater's controllers, programming information about GMRA and upcoming activities on both repeaters. Murray also set up a tour for GMRA members, relatives and guests to the FAA Washington Air Traffic Control Center in Leesburg, VA. This tour took place on Saturday, June 10th with 10 participants in three separate vehicles.

All of us on the tour of the Traffic Control Center enjoyed it immensely. Our guide was an air traffic controller now in a supervisory capacity of new trainees. We were actually guided through the main control center and were able to observe on hand air traffic controllers in operation.

Those able to make the tour were Murray, K3BEQ, his wife Esther and their granddaughter, Jessica. Roy, K3UBI, Don, W3RYQ, Derrick, N3RQS, Sally, VE3VJU/W3 Samson, N3TJU with his mom, Leslie and last Ken, N3HLY. Thanks to Murray for arranging a great Saturday outing. See all of you at the next luncheon.

73's Ken Easton N3HLY



### **Laurel Amateur Radio Club**

A Volunteer Examiner Coordinator

**Meetings:** 4th Wednesday of each month (except November & December) 7:30pm at 384 Main Street, Laurel Md.

**Social:** 2nd Wednesday of each month, except December (Call for directions).

**Nets:** 1st & 3rd & 5th Wednesdays, 8:30pm, on 147.225+, no tone.

**Mail:** P. O. Box 3039, Laurel, MD 20709-0039

**Exams:** 3rd Saturday of each month, to pre-register contact: John/WB3GXW (301) 572-5124 after 6 P.M.

**Information:** Jim/WI3N (301)725-6829 or Pud/W3DQI (301)498-6293.

dampen the spirits or the efforts of the Laurel Amateur Radio Club (LARC) members. Field Day operations were again successful. We hoisted a beam antenna up in a "cherry picker" which made the set up and take down an easy task.

There were 662 SSB contacts on HF and 33 FM/SSB contacts on VHF/UHF, plus another 52 CW contacts on HF. Although the total points were not up to last year's total, we all had a good time with the HF and the VHF/UHF bands. We even has a successful contact via satellite! Twenty-six members were involved in one way or another with Field Day.

### **SUMMER QSOs**

Several members are maintaining a schedule (very flexible) with Howard/K3IOG who is spending some time in New Hampshire, and with Bill/KI7AO, former LARC President, who now resides in Washington state.

Anyone who wants to give them a holler...should check with Pud/W3DQI regarding the schedule.

### **NOVICE/TECH CLASS**

The Club will conduct a Novice/Tech class (theory only) in September. The class is tentatively scheduled to meet on Monday evenings at the West Laurel Recreation Facility. Anyone interested in joining this class should contact Pud/W3DQI at 301-498-6293.

### **CLUB PROGRAM**

At the LARC meeting on 28 June, Ben Kobb/KC5CW, a researcher and writer specializing in spectrum allocations and new radio services, gave an interesting update on current issues concerning the radio spectrum. THANKS Ben...your insights were extremely helpful to our understanding of what may affect us all!

"The rain in Spain falls mainly in..." the field used for Field Day! However, the rain didn't

de Roger/N3MIJ





## The Mid-Atlantic DX and Repeater Association

**Meetings:** Second Thursday of each month, 7PM, rotating locations among Hagerstown MD, Frederick MD, Martinsburg WV and Greencastle PA.

**Net:** Tuesday evenings at 1930 local on 147.06

**Repeaters:** 147.345 (Martinsburg), 147.06, 224.20 & 448.125 (Frederick).

**Mailing:** 230 North Potomac St., Suite 2A, Hagerstown MD 21740

**Information:** Voice BBS 301-416-8447; select box 126 for Sam, N3MPE LandLine  
**BBS:** (301) 416-8435

Sure that this year's picnic would be a big success, we advised you to watch this space for the result. The result was that we were rained out at Greenbrier Park. It was a tough call as sunshine was the rule all over western Maryland but with thunderstorms popping up in between.

A new date for the MADRA picnic is August 26 or 27. Be sure to check into Tuesday evening's 2M net and we'll get you a firm date and place, probably Greenbrier. In cooperation with FARC, we also had SkyWarn II training at Frederick in June, so we know a lot more about what caused our June picnic to be rained out.

But...Field Day never gets rained out. We had a convivial crowd at our hilltop site near Catoctin Park and the equipment gremlins didn't cause us much grief (except for the 6M station). A major generator failure early in the contest punched a deep hole in the treasury but, hey, we're really ready to power up next year with the new one.

As the contest drew to a close, the hard rains of Sunday morning ensured we would have plenty of mud to work in while tearing down antennas and cleaning up the site.

By the time you read this, SweatFest95 will be a thing of the past and most MADRA members will be too tired to read it. As we entered the home stretch in preparation for our first HamFest in Brunswick, all the problems looked like they were resolving. Fourth of July weekend was dedicated to detailed planning and looking for things we forgot. The arrangements for a blimp to hoist our ATV experiment, the InterNet demo and the Potomac Edison electric vehicle exhibit were all on track. If we did it right, readers of this column will be able to say they saw it all, just as described.

The June test session was canceled - too few candidates. The July session was moved to the SweatFest95 date (July 23) and scheduled for the Volunteer Ambulance Co. HQ in Brunswick. August's session will be back to normal at our Smithsburg MD location as shown in AutoCall.

If you've used the computer BBS lately, you've found a bunch of new features: File areas were added for popular radio mods, ATV and other topics. You may have also found that you can no longer download from the upload area. This gives the SYSOP better control over what passes through and some areas are now access code protected. The voice BBS now has 210 boxes and activity has increased to the point of filling up the drive. We will upgrade the system to 100MB and we need volunteers to help update the ten information boxes. Contact WB8VBW at Box 112.

Thanks to Tim, N3MCX, we have a club page on INTERNET. Club info is available there, just as if we were a Fortune 500 multinational! Someday we might be able to work access to our BBS from that page, who knows? Info on how to access the MADRA HomePage is in the club info area on the computer BBS.

The next MADRA meeting will be Thursday, August 10 at 7PM. The place this month is the Mountain Gate Restaurant on US Route 15 in Thurmont MD. Just contact us during the Tuesday net, at Voice BBS box 112 or leave a message for

*Continued next page*



WB8VBW on the computer BBS. That way we can give the restaurant a count of how many radio fiends and friends to expect.

73 DE N2CSQ/3



### The Maryland Apple Dumpling Radio Amateur Society, Inc.

**Meetings:** 2nd and 4th Thursdays - 7:00 P.M.  
NBC Building - WKYS Conference Room,  
4001 Nebraska Avenue, Washington, DC.

**Nets:** 1st and 3rd Thursdays at 8:30 P.M. on  
145.45 MHz.

**Repeaters:** 444.100 PL-2/449.100 MHz,  
145.45/144.85 MHz.

**WWW Address:** <http://mvhsl.mbhs.edu/~fwright/MADRAS.html>

**Mailing:** P. O. Box 2468, Wheaton, MD 20902

**Exams:** 3rd Saturday of each month, 10:00am,  
at Maryland Radio Center, Laurel, MD.

**Information:** Hani Raad - AA3EI (202) 223-  
3925, Larry Ziecheck - N3GKZ (301) 984-  
6113, Jean Blacik - N3PLC (301) 984-6113.

Field Day '95 is history, as the saying goes. After months of preparation attending meetings, making schedules, lining up operators, buying food and drink, checking equipment and antennas, etc., etc., - - it's all over until next year.

These had to be the fastest 24 hours ever recorded. They sped by so quickly this year that it was hard to believe it when 2:00 P.M. on Sunday rolled around. How time flies when you are having a good time.

MADRAS wants to extend its appreciation to its members, friends and families for making this one of the most memorable field days ever.

Participation from members and friends was at an all time high. We had 25 operators who volunteered their services for CW, voice, packet,

etc. Many of our operators were around for the whole 24 hours in case someone didn't make it for their scheduled time at the mike. This never happened since everyone who signed up to operate showed up.

I have always said that ham operators were a committed group. Thank you one and all for your time and effort in making this one of the best field days in years. I hope we will be together again for Field Day '96; after all, it's only 12 months away.

Thanks to the efforts of Hani Raad - AA3EI, we had our new MADRAS jackets for field day this year. Of course, due to the warm humid weather we didn't get the chance to wear them yet. The red jackets with our MADRAS logo in black looks outstanding. Thanks, Hani, for coordinating this project.

During the summer months we will hold our net every Thursday evening at 8 30 P.M. It has been such a pleasure to hear so many of our members and friends on the net recently. Since we hold no meetings during the summer it's a great way to keep in touch.

No restaurant has been chosen for our annual End of Summer Dinner as of yet. We will send notices out the beginning of August as to the date, time and place of the event. Looking forward to seeing as many of you as possible there.

73's .... Jean, N3PLC

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### **Metropolitan Communications Network Radio Club, Inc.**

**Meetings:** Quarterly, the second Sunday of the month. Next meeting is scheduled for Sunday, September 17, 1995 at the home QTH of Lukas Hoska, WA3UEA.

**Repeater:** N3AGB, 52.250 MHz in, 53.250 MHz out; Accessible on 147.36 MHz.

**On the Air:** Saturdays at 20:00 hours local time.

**Mailing:** Mary A. Milligan, KA1KWP, 6608 N. 18th St., Arlington, VA. 22205.

**Information:** Mary A. Milligan, KA1KWP (703) 533-0650



### **Metrovision Amateur TV Club**

**Meetings:** Quarterly: Call for next meeting time and place.

**Repeater:** WA9GVK/4 ( video and audio ) 425-431 MHz in; 438-444 MHz out. Also accessible on 144.970 simplex audio.

**On-the-air:** Sundays ( ATV Net ) at 8:00 P.M. Wednesdays ( Ragchew ) at 8:00 P.M.

**Mailing:** Metrovision, Inc., P.O. Box 8231, Falls Church, Va., 22041.

**Information:** Jim - KA4CKI (703) 494-6342, Tom - KO40X (703) 752-2100.

The second Quarterly meeting was held, Sunday, June 11, 1995 at the QTH of Chris Kushay, KA3LRJ at 1400 hours. In addition to the various committee reports, discussion was held on the repair of the repeater. Alternatives were discussed as to what could be done (Hold the net on Channel 5) until the sites are inspected and the repeater repaired.

We welcomed three visitors, Bill, N3NOE, Joe, and Harry. It is always a pleasure to have new people drop in for an eyeball.

**FM NET SATURDAY AT 2000 HOURS ON THE REPEATER.** The net is being held on 147.36 MHz until the repeater is repaired.

New check-ins are always welcomed.

**THE SUNDAY MORNING COFFEE NET (50.4 MHz) AT 0900 HOURS.** The number of check-in varies but with the nice weather we have had people have been attending HAMFESTS or enjoying a day with the family.

73's, Mary, KA1KWP

Metrovision would like to have it's members and friends do some video taping in their respective Ham Shacks. To be more specific, we would like to have a short segment of tape (about five or ten minutes) of your shack equipment especially your ATV equipment. Please include some personal comments about yourselves such as when you got started in Ham Radio, etc.

I will try over the next several months to discuss more technical issues that deal with Amateur Television. If any of our readers has any material to contribute to this, please let me know.

Many of our members use their VCR to contribute video of various types to our Sunday and Wednesday ATV nets. As many of you already know, the VCR can enable you to tape our net as well as to show video that you have collected from vacations, trips, etc. The VCR, along with the camcorder or camera, are probably the most useful pieces of equipment that you can have next to your ATV transceiver and television set. Please take note that if you do have a VCR, You can use the VCR tuner (tuned to Channel 3), along with either a color or black and white monitor, as your ATV receiver.

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A four head VCR probably will give you more flexibility for ATV work, but a two head model will work as well. I use a two head type and it seems to work fine I will be discussing VCR's in more detail in future articles. I will also be discussing the subject of lighting and ATV work in future articles.

KA3BTD-Rick is preparing a new flyer on the Metrovision ATV Club. This flyer should be ready in time for the Gaithersburg Hamfest so stop by our table and pick one up.

Please don't forget to make your tape of your shack, preferably in VHS, or VHS-c format. You can send your tape to Tom Harmon-KO40X, P.O. Box 10, Hartwood, Va. 22406.

See you on ATV - 73 Dick



### Montgomery Amateur Radio Club

**Meetings:** 1st and 3rd Wednesdays of each month at 7:30 p.m., Executive Office Bldg, Montgomery Co. Govt Center, 101 Monroe St, Rockville. Park in underground lot G-2.

**Repeater:** 146.955 (-600) Rockville

**Club Net:** 2nd 4th and 5th Wednesdays of each month at 7 p.m. on the MARC repeater and 7:30 p.m. on 28.450 MHz.

**Mail:** MARC, P.O. Box 611, Gaithersburg, MD 20884-0611

**Information:** Jeff - KZ3F (301) 258-0112

**Training:** Ms. Rocky Jones (301) 216-5210

Anyone who has even briefly glimpsed a Field Day exercise knows there's something magic about it. Of course, that magic is really not magic at all, but a lot of hard work on the part of a lot of dedicated hams. Still, it there's an almost-magical component to the process — a group of hams with such diverse backgrounds, working styles, and abilities can turn piles of wire, metal, and rope into

antennas and towers in a matter of hours. That was certainly the case for the Montgomery Amateur Radio Club hams who came together over Field Day weekend at the Isaac Walton League site in Damascus, MD for Field Day.

Operating as a 4A contact and using the N3BE callsign, the club began getting ready for the opening moments of Field Day hours in advance. "This isn't something you do over a 24-hour period," says MARC President Al Rabassa, NW2M. "We've been planning and preparing for this almost immediately after last year's Field Day ended." Field Day Chairman Howard Lefkowitz, WA3VEZ, was undoubtedly relieved when the operation ended successfully Sunday afternoon. He was among the first to agree that a successful Field Day experience requires months of hard work and planning. "It's well worth it," Rabassa says, "especially when you give operating opportunities to hams who may not have HF equipment or privileges. I think we managed to get experienced as well as new hams on the air this weekend, and that's important."

Set up operations were well underway by mid-morning Saturday. By noon, the 40-meter antenna was up and being tested. Antennas for the other frequencies followed in quick succession. Some started generators and tuned radios while others activated laptop and desktop computers with various logging programs. There was a sort of New Year's Eve anticipation as a small knot of MARC members looked intently at watches seconds prior to the opening of the contest. Precisely at 2 p.m. local time, the first "CQ, Field Day" was transmitted and the points began coming in.

The site was an excellent one for a variety of reasons. Higher than the surrounding terrain, it offered plenty of opportunity to string wires in trees, and there was enough room for towers. Operators sat in a screened-in covered room; rigs and logging computers were conveniently located on a long built-in counter or table.

As MARC members pursued Field Day targets, gun enthusiasts at a nearby rifle range honed their



target shooting skills. While the two sites were far enough apart that the sounds of target shooting weren't heard by any of MARC's Field Day contacts, the combination of sounds of gun shots, emergency generators, and ham operators calling "CQ" made for an interesting amalgamation of sounds.

Although results were not available at the time of this writing, if success can be measured in terms of participants and the number of opportunities for new and old hams to operate, the Montgomery Amateur Radio Club can put this year's Field Day exercise solidly in the success column.

73 - Nolan Crabb AA3GO



### National Capitol DX Association

**Meetings:** Feb, Apr, Jun, Oct and Dec. at a member's home. Contact the Secretary (Rick Murphy, WA1SPT) for details.

**On-the-air:** Every Sunday at 8:30 PM on the 147.000 repeater. All are welcome!

**Information:** Brian Bayus-N1KCE (703) 264-1180, Rick Murphy-WA1SPT(703) 280-2637 or Leo Boberschmidt-KA3TGY (301) 946-3738 or N1KCE on the PVRC DX Net (@N40HE, N1KCE@KF4TE.VA.USA.NA. or bbayus@ix.netcom.com.

The next meeting of the NCDXA will be the annual 'Fowl Fest' held on Saturday, August 12th in conjunction with PVRC. As always, we can expect this to be a pleasant and relaxed occasion for all of us to get together and make plans and get energized for the upcoming DX'ing season. Our host again this year is Marty Johnson-W3YOZ who will be making available the waterside locale and providing us with the 'excellent', as usual barbecued chicken. If you are interested in attending, give one of us a call for more information.

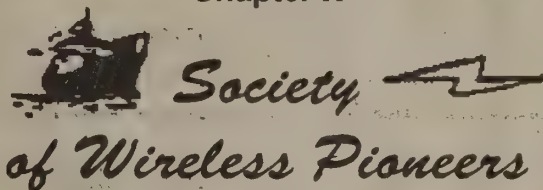
We note with regret the passing in April of William 'Bill' May-W3RX, one of the Charter Members of NCDXA and in whose basement, I am advised, the very first meeting of NCDXA was held, many years ago. He will be missed. Thanks to Jim Douglas-W3ZN for retrieving for us an album maintained by Bill, full of photographs and QSL cards from those early days in the Club's history. After being passed around during the next meeting or two for all to peruse, it will be placed in the Club's archives for safekeeping.

Also, Thanks to Don Search-W3AZD, another one of the Club's Charter members, for providing us with the 'original' Constitution and By-Laws of NCDXA and other historical documents. Included among them is the meeting notice for September 1975 which invited all to join the Boyds (John Boyd-W4WG) at their 'mountain estate' for a little fishing and a demonstration of working DX by satellite! What a combo and a challenge from the past for the current Program Chairman!

Again, we wish to invite any and all of you who are interested in DX to consider becoming a Member of NCDXA. Please give one of those listed above a call for Membership information and consider coming to one of our meetings to find out more about us. We would certainly welcome the opportunity to meet YOU. Also, stop by our weekly Sunday night meetings on the air. It's at 8:30 PM on the 147.000 repeater. Until next time...73 and Good DX.

Brian Bayus-N1KCE

### Chapter X



THE INTERNATIONAL ORGANIZATION  
OF PROFESSIONAL RADIO TELEGRAPHERS

**For Information Call**  
**(703) 536-9537**





## Prince George's Wireless Association

**Meetings:** First working Tuesday of each month, 7:30 PM; American Red Cross bldg., 6206 Belcrest Rd, Hyattsville, MD 20782  
Club Station: K3CEZ

**Mailing:** 4109 Kennedy St., Hyattsville, MD 20781

**Information:** Frank Holton - WA3ZMW  
(301) 927-1245

PGWA held its regular monthly meeting on Tuesday, June 6, 1995. Frank - WA3ZMW opened the meeting at 7:50 PM with a fair turnout of members. Announcements of upcoming Hamfests and incoming correspondence were read and distributed. Minutes of the previous meeting were read and approved. Charles, KA3COT, gave the treasurer's report.

A brief report was given about the annual "Crop Walk" which took place on May 21, 1995 at the First United Methodist Church in Hyattsville, MD. Frank - WA3ZMW and Charles - KA3COT were the only two PGWA members that worked as communicators for the "Crop Walk". They did a very commendable job.

Frank brought an ARRL video tape about a DXpedition of Radio Amateurs from United States and three other countries that ventured to Peter Island in the Falkland group to set up a temporary transmitting station that uninhabited island. The frigid temperatures and over 100 mile an hour winds along with a near tragedy when a tent caught fire, made for an exciting viewing.

On Tuesday morning, June 5, 1995 PGWA worked a (SET) Simulated Emergency Test along with the Red Cross disaster control personnel on hand. Frank - WA3ZMW and Ken - N3HLY received and sent official ARRL messages to emergency sites set up by the Red Cross Disaster Control Officer.

PGWA did not work Field Day exercises this year because of the shortage of operators.

73's form Ken Easton - N3HLY



## Quarter Century Wireless Assn. Shenandoah Valley Chapter #137

**Meetings:** Third Wednesday of odd-numbered months, at 12:30 PM; Carper's Valley Golf Club, 1401 Millwood Pike (Route 50 East), Winchester, VA; reservations suggested.

**Information:** Perry F. Crabill, Jr., W3HQX;  
703-662-7526 Mailing Address: 225 Milam Drive, Winchester, VA, 22602.

Thirty-one members and guests attended the meeting at Carper's Valley Golf Club on May 17, 1995, despite rainy weather. A social period at 12:30 PM was followed by a buffet luncheon at 1:00 PM. The business meeting that followed was opened by President Walter Johnson, WA4HVU, at 1:50 PM.

Charles Anderson, NF3X, reported that the Hagerstown Hamfest had two problems; the date and the weather. However, the hamfest finished somewhat in the black. The date for next year's hamfest will definitely NOT be on Mother's Day.

The speaker was Ed Helvey, WA2FMT, a Winchester area resident originally from Northern New Jersey. He is currently an independent audio and video producer with clients across the country, and also does business consulting, seminars and workshops. Ed has learned how to put the computer to work and considers the Internet the most exciting information concept in the history of civilization. His topic was "Exploring and Exploiting the Internet."

The Internet is an outgrowth of the Department of Defense's ARFANET established in 1969 for computer networking, allowing any computer to



communicate with any other computer, using a common language. It connected research centers and colleges with a decentralized network without a central computer.

ARPANET grew over the years with the addition of various nodes and host computers. In 1984 computers on the network exceeded 1,000; by 1987, the number was more than 10,000. In 1988 businesses began to connect to the system. In 1989 the number of connected computers grew beyond 100,000, and in 1990 the system became officially known as Internet. It is actually a network of networks.

The "World Wide Web" was added in 1992; by this time the number of computers on the Internet broke one million. With the Web, you can travel around the world getting information in a matter of only seconds. If you enter keywords for a subject, the Internet will tell you where you can find it. Today, there is no accurate figure on the number of connected users; *estimates vary* from 30 to 65 million.

Even the White House and Congress are connected to the Internet; you can *access* these for President Clinton's schedule, for information about your Congressman or Senator, or what's happening on Capitol Hill.

Internet keeps growing; now you can see video clips, listen to all kinds of music, and even tune in radio stations. It offers everything wonderful and good; unfortunately, it also offers everything nasty and bad. With suitable software and equipment, you can talk with your *voice* to others similarly equipped. This enables you to make long distance calls without a toll charge; you pay only for local access to the system.

America On Line, Prodigy, and Compuserve are national computer services which include Internet access. They have no local nodes in Winchester, and you must pay toll call charges to reach them. The only local Internet access in Winchester is via Shentel Service, an adjunct of Shenandoah Telephone Company; it has an 869

number in Stephens City. The minimum charge is \$20 per month for 15 hours on line.

For the Internet, your computer should be a 386 PC or better, or a recent Macintosh model. A lot of hard drive space is needed, the minimum is 256 megabytes. At least 4 mb of RAM should be available; 8 mb is better, and 16 mb much better. The modem should handle at least 14.4 kb, but 28.8 kb is better. An SVGA monitor with .28 dot pitch is preferred.

The next meeting will be on July 19, and will feature a program by Ed Rich, K3THD, on stained glass.

Perry Crabill, W3HQX - Secretary/Treasurer



## Shenandoah Valley Amateur Radio Club

**Meetings:** First and Third Friday of every month at 7:30 p.m. SVARC Club House 2921 Grace Street, Winchester, Virginia

**Repeater:** 146.22 In/ 146.82 Out

**Net:** Shenandoah Valley Emergency Net (SVEN) 7:15 daily on 146.22/146.82 Repeater

**Mailing:** P.O. Box 139 Winchester, 22604

**President:** Irv Barb KD4BHV (703) 955-1745

**Info:** George Ritter W4UGX (703) 662-0157

Well, here it is, August already! I'd just like to remind everyone that our HAMFEST is on 6 August 1995. Gates open bright and early at 6:00 a.m. For those early arrivals, there will be a Country Ham and Egg Breakfast and for lunch the Berryville Ruritans will again provide their Famous Chicken & Beef Barbecue. VE Exams will be held at D.G. Cooley Elementary School, which is right across the street. The Mountain ARC VE's will be administering the tests. If there are any questions regarding the exams, contact Leo Patterson or the Mountain ARC. If there are any questions

*Continued next page*



regarding the Hamfest, contact Irv Barb (KD4BHV) at 703-955-1745.

Many things have happened since June and early July. As a result of an agreement with the Winchester Medical Center (WMC), installation of radio equipment is nearly completed at the WMC and its two sister hospitals. The equipment will provide a means of emergency backup communications for the hospitals as well as access to the local amateur radio community. The systems include both voice and record communications capabilities. This will be an ongoing project for the SVARC throughout the summer.

In order to increase Net participation, Mary Ann Foble (N8ODZ) has developed a certificate program. Certificates will be awarded to those who check into the Net at least four times per month for three consecutive months. There is also a certificate program for those who check into the Net at least four times per month for an entire year. The Shenandoah Valley Emergency Net (SVEN) meets nightly at 7:15 p.m. on the 146.82/22 repeater. SVARC President Irv Barb announced at the June 2nd club meeting another motivational program for Public Service Events. Club members can earn points by participating in various events. At the end of the year, prizes will be awarded to high scorers. The prizes have not been announced, but it has been promised that the prizes will be good ones!

June 24 was a busy day for SVARC members. Not only was it Field Day, but the Loudoun Street Mile was held that morning. Club member Jim Hodson (KE4JJR) was the course marshall. Other participants included (but aren't limited to!) Fred Wetzel (W4KRT), John Brooks (KC4YMR), Irv Barb (KD4BHV), Jane Barb (KD4IET), and Mary Ann Foble (N8ODZ). Those previously mentioned were just the one's that managed to get in front of the camera! After the traffic jam cleared in downtown Winchester, most of the members went straight to the SVARC club house at 2921 Grace Street to set up for field day. Antennas were set, generators fueled, solar panels placed and by the 2:00 p.m. start time, the SAVARC was ready.

Nearly 38 club members participated, 21 of those were ARES members. Stations were operated on 20M Phone, 6M FM, 440 Digital, 40M SSB, and HF Solar. The CW contingent also set up a station. All stations were operated using Emergency power. Special thanks go out to Janie Wetzel (KA4HOP), Jane Barb (KD4IET), and Susie Reeder (KF4ARN) for keeping us all fed and caffeinated throughout the event. Vice-President Rick Choy, our official burger-flipper, did an excellent job with dinner preparations (i.e. he didn't burn anything). This was my first field day and I had lots of fun working 20M. However, the SVARC needs softer chairs for next years field day!

Well, that's it for this month. I hope everyone has a safe and enjoyable August.

73 'til next month de Laura Stewart /KE4QJT



## Southern Patuxent Amateur Radio Club

**Meetings:** Second Wed. each month at 8:00 pm. Southern Community Center, Lusby, MD.

**Nets:** Tuesdays, 7:30 pm, 146.985, Tuesdays, 8:30 pm, 147.195. Thursday, 8:30 pm, 28.410.

**Repeaters:** N3AGB 29.620 (-), W3ZNW 146.985 (-, autopatch), N3JTG 147.195 (-, 156.7), N3JTO 147.390 (-, 156.7, autopatch), N3AGB 443.300 (+, autopatch), KA3ZYG 449.225 (-), N3AGB 444.350 (+)

**Club Address:** P.O. Box 399, St. Leonard MD 20685

**Info:** Steve Franc (301) 373-3605 or Glenn Thorn (410) 326-0115

## Tower Zoning

The Calvert County Planning and Zoning Board has released the next level of the tower zoning draft. The bottom line is that towers will not be allowed higher than 100 feet without special permission. Also, residents may not put up more than one tower without special permission.



Hopefully the moratorium will be over by sometime this summer to leave enough good weather for pouring concrete pads.

### Classes

The Spring class was wrapped up last month with two VE sessions in California MD. There were 28 tests given to 21 applicants. Receiving Technician licenses were: Donald Abell, Derek Viars and Kenton Fadely; receiving Tech Plus were: Chris Dagey / KA3WBN, Robert Blevins / KB3BFY, Allan Fenwick and William Orth, IV.

Upgrading to Advanced was Steve Wachter / KB3AMP. Passing the Extra theory was Chris Harlow / KA3GLF and passing the Novice theory was Kevin Detwiler, Henrietta Nueslein and David Moore.

### Repeaters

SPARC member Marty Gary / N3HRT recently upgraded the antenna on his 146.775 (-) repeater near Lexington Park. The new station master has increased coverage quite a bit.

Kevin Kelly / N6QAB has been improving the 145.13 (-) repeater in Lusby. He has recently added a new computerized controller with voice ID and a DVR.

### Field Day

No word on the final score yet, but the 7A station from Dorsey Park in St. Mary's County worked most of the bands for the 24 hour period.

The pavilion worked out great again this year and Kevin Kelly's fox hunting version of "blind man's bluff" was enjoyed by all.

The 100 (plus) attendees brings up the possibilities of having two field days next year (an additional field day for Calvert county).

Submitted by Dwayne Kincaid WD8OYG



### Mount Vernon Amateur Radio Club

**Meetings:** Second Thursday of each month, 7:30 p.m. (except December) Mt. Vernon Governmental Center 2511 Parker's Lane, Alexandria, VA 22308.

**Nets:** Every Tuesday at 9:00 p.m. Starts on 2 meters then moves to 10 meters on 28.408.

**Repeater:** WD4PDP 146.055 input / 146.655 output.

**Mailing:** Mt. Vernon Amateur Radio Club (MVARC) c/o Joe Salemi KR4CZ, P.O. Box 7234, Alexandria, VA 22307.

**Information:** John KI4HK, (703) 780-2882 or Julie KD4WSZ, (703) 799-9466 or Packet 145.650 KD4LST-1.

Field Day '95 was another enjoyable event despite the weather and several equipment problems. The rain held off long enough to set up the stations and start transmitting. One rig shut down and later was found to have a "bug" in it, literally - a small insect was stuck in one of the receive relays! While the scores weren't the highest, everyone had a good time and is looking forward to next year.

The Club's reporter WD4PDP is up and running much better with the replacement of the transmission line, repairs to the antenna and some adjustments and repairs to the controller. The antenna is ten feet higher and the operating range has been extended somewhat. Thanks to Jim WD4PDP, Steve WB4EEA, Frank N4GUS and Doug WA3WEP for a job well done.

Listen for the Club call in future operations. The new call is KE4ZXV.

Certificates confirming contacts with NJ4F during the special event operation commemorating the 132nd anniversary of the Civil War battle at  
*Continued next page*



### *FCC Highlights, from page 9*

"These systems are very secure. Pirates and jokers simply can't take advantage of these systems. You make sure of that. They are also very slow. The rule making task, therefore, was to find an accommodation that would allow your message forwarding systems to operate at high speed without opening them to intolerable abuse. There were 42 comments and two reply comments filed.

"As we said at the outset, we must stop at this point; we are just plain out of space. Still to come is the balance of the Digital Message Forwarding text, and sections on frequency allocations, getting a call sign of your choice, new sequential call signs, new club and military station licenses, electronic filing of license applications, immediate operation authorization, new license renewal procedure, and license examination issues.

### **SURVIVOR'S ASSISTANCE SALE**

#### **Estate of W2BUU FOR SALE**

Collins KWM-2 w/P.S. & Spkr  
Drake TR-4 Transcvr w/spkr & P.S.  
Drake L4B Linear Amp. w/p.s.  
Drake T-4C Transmitter w/ p.s.  
Drake R-4C Receiver  
Drake MS-\$ Speaker  
Drake MN-2000 Antenna Tuner  
Drake RV-4 Remote VFO  
Turner D-104 Microphone  
Dentron 160-10 L Linear Amp.  
SBE-144 Transceiver  
Swan FM-2A 2 mtr xcvr  
Miscellaneous parts & test eqmt.  
Best Offer Phone (703) 941-4814

### *Mount Vernon ARC, from page 51*

Chancellorville are being prepared and will soon be mailed.

The Club's public service role continues to grow with the addition of a co-sponsorship of a Scouting Explorer Post. Several members are serving on the Post's committee and others will provide "Elmer" assistance once the activities begin.

Other members have signed on to help with phone patch traffic and message service at the U.S. Coast Guard's MARS station NNNØNCG.

Training sessions are being held to provide a pool of certified operators to take over when Bert, the current duty op leaves for sea duty. MARS operators provide everyone with the opportunity to gain some HF operating experience, regardless of license class.

The Club will be providing its annual communications support to the Fourth of July

activities at Lee District Park.

John, WZ4A advises that a Novice/Technician class will be starting in September. For those interested, code training will be offered along with theory.

Don't forget the monthly Club breakfast on the fourth Saturday at the Denny's on US-1 at Lockheed Boulevard. The July get together should be resplendent with Field Day stories. See you there.

73, Chuck W3HSW

**Mid-Atlantic Radio Club.** Become a part of one of the country's fastest growing vintage radio clubs. The Mid-Atlantic Antique Radio Club is an active group of radio collectors, restorers and historians. For a sample newsletter, write to Joe Koester at 249 Spring Gap South, Laurel, MD 20707. Phone (301) 725-4229.

[SWP]



### Design parameters

Don't be tempted to stray from the design presented. There are many key design parameters which are not obvious to the casual builder. Bandpass characteristics, insertion loss, and impedance's have been calculated into the design.

### Capacitor Selection

High quality air-trimmers are a must. Look for small transmitter-type variables with wide plate spacing. Wider spaced units are sought for power levels approaching 35-45 watts, otherwise, standard spacing work fine. Silver-plated surplus capacitors are an excellent choice.

### Safety Points

It is worth noting that during the tune-up procedures, high voltages are present at the trimmer capacitors. Keep the enclosure covered any time you apply RF power. This limits your exposure to RF fields, especially to your eyes and head. Play it safe.

### Construction

The enclosure is drilled to accept the BNC connectors, brass screw coil bases, and the trimmer capacitors.

Each coil consists of 4-1/2 turns of #12 bare copper wire wound on a 7/8" form with the cold end pressed into the head of a slotted brass screw, then soldered. A small vice makes this step very easy.

Use sufficient heat when soldering the coil to the screw because copper and brass spread heat quickly. Both coils must be identical (Note: Since you have the high-power soldering equipment out, tin the coil from the zero through 1/4 coil turn positions. This will be your tap position for soldering later.)

The antenna analyzers offered in the pages of Auto-Call/QST/73/CQ, etc., make an excellent investment, especially those with multiple displays, such as: frequency, SWR, and impedance. We used the old-fashioned SWR meter and dummy load for this project with outstanding results.

### Tune-up

Begin with each trimmer capacitor at the 10% meshed position (almost minimum value). Place the lid on the enclosure, and run several watts of power into the filter and adjust for minimum SWR into a 50 Ohm dummy load. Alternately, adjust each trimmer capacitor until a dip in the SWR is noted. You may have to move the tap-point to find the 50 ohm point. Be patient! Move the tap point no more than 1/16" at a time. This is where test equipment really shines. Remember to maintain symmetry between the coils. When no further SWR improvement can be made, you're finished! Label the BNC connector toward the transmitter "TX", and the BNC toward the dummy load "ANT".

### Performance

Over-the-air testing is nothing short of superb! I can be anywhere in the downtown area and hear our repeater without interference. Your filter should exhibit 10-12 dB of rejection at 152 MHz which is the beginning of the pager services in our area.

[Ed Note: The detailed construction manual offered by the MARC Club by Al may be downloaded from the W3INK BBS (301)216-0662. The filename is FAR2MFLT.WRI and can be printed by the WRITE.EXE that comes with Windows 3.1].

### References:

- [1] RSGB VHF/UHF manual, Chapter 6, Filters.
- [2] A.E. Pufpaff Inc., 5309 Hinman Rd, Lockport, NY 14094.
- [3] Dan's Small Parts and Kits, 1935 S. 3RD West #1, Missoula, MT 59801 (406)543-2872 (#10 SASE for catalog.)



in 1994 coordinated 374 exams, or about 1% of the exams given in the 4th area.

### **APPLE PETITIONS TO CREATE WIRELESS 'N2 BAND'**

Apple Computer has filed a Petition for Rulemaking with the Federal Communications Commission, asking for a spectrum to permit high speed data communications for schools, libraries, community groups, individuals, businesses and institutions. The proposed radio service is called N 2 and would be available to anyone without licensing or air time charges. Kind of like amateur packet radio but without the need to be a ham.

In addition to permitting faster data rates, the N 2 Band would allow users, for the first time, to set up their own wideband wireless data links spanning five miles or more. Rural and other dispersed communities and suburban interest

groups would be able to use the N 2 Band to develop local networks as well as for N 2 participation. Apple says that its N 2 proposal would complement, not replace, other licensed and unlicensed network technologies.

One part of the N 2 Band comprises radio frequencies from 5150 to 5300 MHz. These are already earmarked in Europe for local area wireless networks. The second portion, from 5725 to 5875 MHz is already available for low power, unlicensed spread spectrum devices under Part 15 of the FCC's rules. Adding N 2 says Apple would allow fuller use of the spectrum while permitting smooth transition to the benefits and technologies of the N 2 system.

Apple's N 2 proposal follows on the heels of its successful five year effort to obtain a frequency allocation for unlicensed data personal communications services. Data PCS allows

*Continued next page*

## **Memorandum**

### **Visit**

**Amateur Radio of Hagerstown  
at their new location at  
17561 York Road in Hagerstown, MD**

**Take Interstate 70 to Interstate 81  
North to Halfway Blvd to York Rd. (Entrance by Western Sizzlin')  
Open: Monday-Friday 9 AM to 6 PM, Saturday 9 AM to 5 PM  
(301) 416-8079 (301) 714-0688**



computing devices to communicate wirelessly at relatively high data rates within a local area, such as throughout a school. Because the Data PCS band is unlicensed, a user may establish and operate a wireless data communications network without paying a service provider for installation and air time.

## HACKERS HIRED TO HACK

And while on the topic of computer companies, word that Sun Microsystems Inc. is challenging three renowned computer experts to tackle what the company says is its uncrackable new Internet security program. Cryptographer Whitfield Diffie, consultant Tsutomu Shimomura and programmer Dan Farmer have been hired to do everything they can to break into Sun's new Java and SunScreen technology.

Diffie is renowned for writing and breaking codes. Shimomura is the San Diego security expert who led FBI agents to alleged superhacker Kevin Mitnick, N6NHG earlier this year. Farmer helped write and distribute SATAN, a program that allows people to probe networks for security flaws.

SunScreen is a piece of computer hardware that plugs into a computer and sends messages onto the Internet. It scrambles the outgoing traffic into what Sun says is an uncrackable code as long as the message is received by another SunScreen at the other end. If it works as promised, SunScreen would allow sensitive data such as credit card numbers to be shipped over the Internet without fear.

## TWO VEC's DOWN

Gordon Girton, W6NLG of the Sunnyvale V.E.C. says that it is beginning to look as if the nation will be down to 16 V.E.C.s as of July 1st. Gordon notes that Great Lakes V.E.C. has not proctored a test session in the past six months. Also says Girton, the Charlotte V.E.C. has notified the FCC that it will stop testing on July 1. This, due to health problems with one of the group's senior

administrators.

W6NLG adds that the new and badly needed 610 V and 1070 V forms appear to still be on hold but he hopes to know more as a result of the V.E.C. Conference in Gettysburg on June 23rd.

## NEW ADVANCED QUESTIONS

Also on the examination front, effective July 1, 1995, a new Advanced class question pool takes effect. V.E. exams beginning on that date will use questions from the new pool.

The new, 4th Edition of The ARRL Advanced Class License Manual is now available and covers these new questions.

## THERNES APPOINTED NEW GREAT LAKES VICE DIRECTOR

John Thernes, WM4T, of Covington, Kentucky, has been appointed vice director of the Great Lakes Division for the unexpired remainder of the term of that office. A former Section Manager, John will serve until January 1, 1996.

The vacancy in the office of vice director occurred when former Vice Director George Race, WB8BGY, became the new division director following the resignation of Al Severson, AB8P.

## SSTV at W1AW

A complete, modern slow scan television system has been donated to W1AW. The system, designed by John Langner, WB2OSZ, includes his PASOKON TV software, a "frame grabber", a 486 color computer, and a charge coupled device (CCD) camera.

The system, valued at some \$2,000, was donated by Norm Creller, W8MPM. Creller is a manager at Chrysler Motors in Toledo, Ohio. The new SSTV equipment is set up for use by visitors to W1AW. They will be able to observe SSTV on the HF bands as well as to send pictures.





# F.A.R. Fest Needs You!



Your Help is Needed at FARFest '95! Member organizations of the Foundation for Amateur Radio are required and expected to supply support for FAR activities. In the past, many organizations have just ridden along on the coat tails of FAR and that is a shame.

The Foundation does noble work by supporting causes that advance amateur radio in general. The most noteworthy is the administration of more than 55 scholarships to deserving amateur radio operators around the country who are continuing their formal education.

FAR's biggest income comes from the annual FARFest (the Gaithersburg (MD) Hamfest). The time is now for your member organization to help. The FARFest Committee needs volunteers to help in various areas before, during and after FARFest.

Before FARFest, we need helpers on Friday, September 8, to help set up the public address system and prepare the grounds. Work will start at about 10:00 am and last into the afternoon. On Saturday, September 9, starting at about 9:00 am, we need helpers to set up inside and outside facilities. This involves setting up tables for commercial vendors (both inside and outside), selling tickets for early arrivals at the gates and providing general support for whatever is needed. Overnight, we need a team to assist the hired security personnel to ensure that all buildings and outside areas are secure.

On the day of FARFest, September 10, starting at 5:00 am, we need lots of support help. All kinds of problems crop up all day long and we need general helpers all over. We particularly need help securing the building(s) so that bona fide vendors may be allowed inside to set up, but not allow entry of the general public before 8:00 am.

If members from your FAR affiliated club can help out, please contact Al Brown, WA3FYZ. Al's daytime phone number is +1 202 619 2020. His fax number is +1 202 619 3576. Evenings call +1 301 490 3188. Al's packet address is WA3FYZ @ WB3V.MD.USA.NA and his Internet address is eab@voa.gov.

FARFest '95's success depends on your organization's participation and your help is sorely needed.



# G<sup>AND</sup>G ELECTRONICS

OF MARYLAND

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= \$



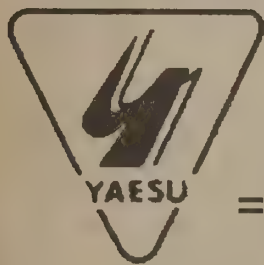
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Non-commercial advertising of Amateur associated equipment is available to subscribers of *Auto-Call* at the rate of 3 cents per word with a \$1.00 minimum. Commercial vendors and non-subscriber rate is 17 cents per word with a \$5.50 (1 inch)-minimum. Special headings or special spacing (e.g. one item per line) may be used but such ads will be charged at the column inch rate.

Estate sales for Widows assistance handled by a FAR club will be published without cost.

Your full name and address must be provided with each ad but need not be published. No ads will be accepted over the telephone and all ads must be prepaid. Ads that will be running for longer than 1 month must be accompanied by a letter stating the length that the ad is to be run. Since no effort is made to investigate advertisers, no warranty can be implied. Send all commercial and non-commercial advertising and Shack Sales to:

**John Queen, Auto-Call Editor**  
**755 Woodland Way, Owings, MD 20736**  
**(301) 855-0198**

Copy **MUST** be received by the 1st day of the month prior to the month of publication.

**FOR SALE:** Cushcraft Tribander 20/15/10M very good condition. used 3 years. Good buy. Price negotiable. George - KD4FF. Work (703) 838-4479, Home (703) 754-2752. [8/95]

**WANTED:** Johnson 275W matchbox. Will pay \$100 for one in good condition. Maybe more if condition good enough. Morris Bealle, K3INF. 5705-83rd Place, New Carrollton, MD 20784. (301) 577-8227. [8/95]

**FOR SALE:** Drake TR-7, L7, Yaesu 726R, KLM tribander, three Snyder wide band dipoles, Create UHF log periodic, Palomar & Welz antenna meters, Drake and Hyvac antenna switching systems, TR220, two mobile 2 meter xcvs with antennas, CB xcvr with mobile antenna, HP frequency counter, UHF signal generator, new leader scope and digital meter, keyboard, Autronic key and electronic keyer, test gear, magazines and books, coax, calbe, etc., etc. Cash or cashiers check for large items. 73's, Larry W3MSN (301) 894-3977. Oxon Hill just off Beltway. [8/95]

**FOR SALE:** Butternut vertical 80/40M 32ft tall. Good for low band DX. Very good condition. Price negotiable. George - KD4FF. Work (703) 838-4479, Home (703) 754-2752. [8/95]

**WANTED:** Home theater HiFi receiver wanted (has several VCR and audio inputs/outputs); high audio wattage output rating not necessary. (703) 370-1880; (703) 370-9049 fax. Alexandria. [10/95]

**FOR SALE:** Antique radios: including floor model Philco; Kenwood TS-820S and TS830S; 2 meter 11 element Yagi; mini beam needs work; Butternut vertical, HF6 w/WARC resonant coils plus counterpoise modkit; old NCX 5 (works); antique EICO 753, 3 band CW, AM, SSB works. Prices negotiable. This one is free you haul - 40 ft, crank up tower. Needs repair. Bill, W4LRD, (703) 536-5994. [8/95]

**WANTED** for museum: Apple-1 and other pre-1980 microcomputers, also early microcomputer journals, newsletters and advertising literature. (703) 231-6478 or (703) 763-2321. [11/95]



**WANTED** dead or alive: Six meter transceivers, transmitters and receivers, desk mic by Heathkit for the HW-101. Call Jim, N3OHS (703) 243-5460. [8/95]

**WANTED:** Crank up tower mounted on trailer. KK4WW (703) 231-6478. [10/95]

**FOR SALE:** EIMAC tube socket SK620A (new), silverplated with bypass capacitor and mounting clips, \$25.00. Ceramic Chimney, E.F. Johnson part number 124-0111-001 (new), \$10.00. Two 4X150's (new) and two used 4CX250's (used), \$50.00 or best offer. Dick Wallace, K3TND (301) 384-6366. [08/95]

**FOR SALE:** Johnson Jr. antenna tuner with antenna SWR meter and coupler extra clean. Sacrifice \$60.00 plus shipping. Buying military Jan Surplus tubes, any quantities C11 Milton anytime. Levy W5QJT, 2042 Australia Way West #8, Clearwater, FL 24623. (813) 791-3462. [08/95]



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## New Shack Sales rates Effective with the October 1995 issue of *Auto Call*

Effective with the October 1995 issue, Shack Sales rates for subscribers will be 5 cents per word, with a minimum ad cost of \$2.00. Non-subscriber rates will remain at 17 cents per word.

Still your best deal on ham radio advertising anywhere! Reach 2,000+ readers with *Auto Call*!

The **AMATEUR RADIO NEWS SERVICE** is an organization of publishers and editors of Amateur Radio newsletters and members engaged in public relations. Its purpose is to assist editors in any way possible. For information, write to Lee Knirko, W9MOL, Amateur Radio News Service, 833 Park Plaine, Parke Ridge, IL 60067.

[SWP]

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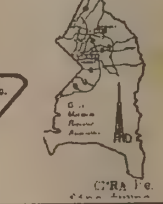
P.O. Box 81

Washington, D.C. 20044

Please Send \$25.00 Donation  
With \$5.00 for S & H

[596]





## Is your club logo pictured here?

If not, it should be!! We're still looking for a few good logos. *Auto Call* will include your club logo in the heading section of your Club Column. Now's your chance to show off your 'club colors' and add distinction to your column. Submit your club logo in either good contrast black and white copy, or electronically on a 3.5" Macintosh or MS-DOS disk in an EPS or TIFF format. Send your clean black & white club logo in any size to: John Queen, Editor, *Auto Call*, 755 Woodland Way, Owings, MD 20736.



## Survivor's Assistance Program

The Foundation's Survivor's Assistance Program has been in operation for many years and has accomplished a great deal for the families of our Silent Keys. The program offers to help widows (and other family members) evaluate and dispose of radio equipment in an Amateur's estate. Listings of Estate Sales are carried in the Shack Sales of *Auto-Call* magazine free of charge, and major items may be offered for sale at local hamfests, etc. No fee or commission is charged the families.

One other option that should be considered is donating equipment to a club taking a tax write-off for the charitable contribution. The Survivor's Assistance Program can help you find a club that will make good use of the equipment. Some commercial operations are also willing to purchase the complete list of equipment and clear everything out at once. This may be the quickest solution in disposing of an estate.

Every ham is encouraged to maintain a list of his/her radio equipment, with realistic evaluations, and instructions on the disposition of any specific items you would like to have go to a special person or organization. Keep your family advised of your wishes.

For more information about the Survivor's Assistance Program contact any local Foundation member club or call Tony Young/WA3YLO at (301) 262-1917.



## SHACK SALES & COMMERCIAL ADVERTISING

Deadline for copy is the 1st of the month preceding the publication date. Shack sales will NOT be accepted over the telephone. Full address must be provided for our reference but need not be published. Each ad must include the full name of the advertiser. Each word, abbreviation, model number or group of letter/numbers is counted as one word. The entire telephone number - including city, state and zip code is counted as only one word. Remittance for all Shack Sales must accompany each ad.

Noncommercial Shack Sale advertising of amateur associated equipment is available to subscribers of Auto Call at 3¢ per word - with a \$1.00 Minimum. Commercial Vendors and nonsubscribers rate is 17¢ per word with a \$5.50 minimum.

and it must be signed by the person authorizing payment for the ad. Full name and address must be provided with each ad but need not be published. Payment should be included when the ad is submitted for publication. No ads will be accepted over the telephone. Since no effort is made to investigate advertisers, no warranty can be implied.

DISPLAY ADS are "Boxed" and may contain artwork or photographs. Requests for specific placement in the magazine will be honored if practical but cannot be guaranteed. Display ads are charged according to size as shown below, based on camera ready copy. All advertising must be prepaid for at least the current month.

### Rates Per Issue

Special Headings or special spacing may be used (e.g., one item per line) but such ads are charged at a column inch rate - \$1.00 per inch for noncommercial ads, \$5.50 per inch for commercial vendors and nonsubscribers.

Ad Size	1 Year	6 Times	3 Times	1 Time
Full	\$75.00	\$90.00	\$100.00	\$105.00
1/2	55.00	65.00	71.00	75.00
1/3	40.00	46.00	51.00	54.00
1/4	33.00	38.00	41.00	43.00
1/6	22.00	26.00	28.00	30.00
1/8	17.00	20.00	22.00	23.00

Commercial vendors should include the ad size and length of run (e.g. 1 year, 6 times, etc.) on company letterhead

## JWO SERVICES

**Discounts on All! ARRL, AMECO, RSGB, CALLBOOK, W5YL, CQ, G. WEST, etc, Ham related books; software and video tapes—all at a discount!**  
**INSTRUCTORS, order all of your needs from us - we take back all unused materials!**

New! ARRL OPERATING MANUAL (List \$22) Only \$20.00, 10-up \$18.70. PACKET: SPEED, MORE SPEED and APPLICATIONS (List \$15) only \$13.75. Your HF Digital Companion (List \$10) Only \$9.15. New! ARRL Advanced Class License Manual (\$12) Only \$11. Special 10-up prices. 1995-1996 ARRL REPEATER DIRECTORY (List \$7) Only \$6.45, 10-up \$5.95. 1995 ARRL HANDBOOK (List \$30) 1-9 \$27.50, special 10-up prices. ARRL Antenna Compendium IV with software (List \$20) Only \$18.25. New, released June 1995! CD-ROM Callsign disk. QRZ! HAM RADIO Includes US, Canadian, England and Italian ham listing, plus hundreds of ham related programs. (List \$29.95) Special price- only \$18.00! UPGRADING & REPAIRING PC's by QUE - latest 4th Edition over 650,000 copies sold! Very Popular! (List \$40) Only \$32.50.

Only \$0.40 handling per order plus shipping.

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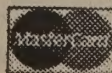
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Phone: (717) 731-4747

FAX: (717) 730-9373

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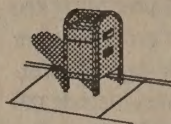




# Auto Call Production Policy



**Deadline:** The deadline for ALL submissions to *Auto Call* is the 1st day of the month prior to the month of publication. When submitting via regular mail, time your mailing to ensure delivery by the 1st of the month.



**Regular Mail:** Mail typewritten or computer generated hard copy to: John Queen, Editor, Auto Call Magazine, 755 Woodland Way, Owings, MD 20736. Ensure that your printed material is dark enough for scanning.

## Submitting Material to *Auto Call*

Submissions for *Auto Call* will be accepted in the following formats:



**Electronically:** Submissions are accepted in any of the following ways: Via the BWIBBS (WB3V) at (410) 312-2219, E-mail message or upload file to KAØSEY. Or via any of the major on line services directly or over the Internet. Use the applicable format exactly as follows:

America On Line - JohnQueen  
AppleLink - johnqueen@aol.com@internet#  
AT&T Mail - internet!aol.com!johnqueen  
BitNet - johnqueen@aol.com@cunyvm  
CompuServe - INTERNET:johnqueen@aol.com  
Connect - johnqueen@aol.com  
Delphi - internet"johnqueen@aol.com"  
FidoNet - To johnqueen@aol.com<CR><CR>  
GEnie - johnqueen@aol.com@inet#  
MCI Mail - mbx: johnqueen@aol.com  
Prodigy - johnqueen@aol.com



**Computer Disk:** Submissions are accepted on 3.5" or 5.25" computer disk, in either Macintosh or MS-DOS format, using Word, WordPerfect, or standard ASCII text files. Write your name, telephone number, and club name on the disk. Submit graphic files (club logos, etc) in an EPS or TIFF format. Please verify the readability of your computer files before sending. If you want your computer disk returned immediately, include a SASE envelope with .32 postage. Otherwise, disks will be returned only in person at FAR meetings.

## Preparing Material for Submission

**Club Columns:** Member clubs are allocated one full page in each issue for club columns. In determining space requirements, figure about 700 words per page not including the space taken up by headings, photos, etc. Indent paragraphs .25" and double space to begin a new paragraph. Send club header information ONLY when different from what was published from previous month.

**Hamfests/Events:** Member clubs are allocated one full page per year to promote one club sponsored hamfest, convention, or special event. Submit clean black & white camera ready copy only by mail. Master copy should be in black ink on white paper and should be in proper page ratio, (Copy space is 7" wide by 9" high). Copy can be reduced or enlarged as necessary. Electronic submissions of Hamfest ads will not be accepted.

**Photographs:** The editor will select the best photograph submitted for the cover each month. Photographs should depict club members, club stations, or amateur radio related events that are current and noteworthy. Clubs may also submit photographs for inclusion with their club column. Photographs will be used in columns when space permits. Either B&W or color photos can be used. For each photograph submitted, write your name, phone number, and club name, along with a description of the photograph on a piece of paper, and tape it on the back of the photograph. Do not write on the back of your photo. If you want your photos returned immediately, include a SASE envelope with sufficient postage. Otherwise, photos will be returned only in person at FAR meetings.





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Signature: \_\_\_\_\_ Expires: \_\_\_\_\_

Atlantic Division Director  
Hugh Turnbull, W3ABC  
6903 Rhode Island Avenue  
College Park, MD 20740  
Phone: (301) 927-1797

**The American Radio Relay League**  
225 Main St.  
Newington, CT. 06111 USA

Roanoke Division Director  
John Kanode, N4MM  
Rt. 1, Box 73-A  
Boyce, VA 22620  
Phone: (703) 837-1340



## Area Club Meetings - August 1995

<i>Sunday</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>	<i>Saturday</i>
		<b>1</b> PG Wireless	<b>2</b> BARC Montgomery	<b>3</b> VOA Anne Arundel	<b>4</b> Shenandoah	<b>5</b> Green Mtn.
<b>6</b>	<b>7</b> DOSARC	<b>8</b> Antietam Woodbridge	<b>9</b> FAR (MD) So. Patuxent	<b>10</b> Mt. Vernon Mid-Atlantic MADRAS	<b>11</b> Southern MD Vienna	<b>12</b> North Point
<b>13</b> Carroll Co. Hamfest	<b>14</b> Carroll Co.	<b>15</b> Arlington	<b>16</b> BARC Goddard Montgomery	<b>17</b> Anne Arundel	<b>18</b> Shenandoah	<b>19</b>
<b>20</b>	<b>21</b> OVHA	<b>22</b> Antietam Columbia	<b>23</b> Laurel	<b>24</b> MADRAS St. Mary's	<b>25</b> Central MD Vienna	<b>26</b>
<b>27</b>	<b>28</b> T-MARC Green Mtn.	<b>29</b>	<b>30</b> Carroll Co.	<b>31</b>		